"THE EFFECTIVE PRACTITIONER:

THE ROLE AND CONTRIBUTION OF THERAPIST EFFECTS IN THE DELIVERY OF PSYCHOLOGICAL THERAPIES"

A thesis submitted in fulfilment of the requirement for the

Degree of Doctor of Philosophy

Jo-Ann Pereira

Department of Psychology

University of Sheffield

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Declaration

I hereby declare that this thesis is my work and effort carried out under the supervision of Professor Michael Barkham and Dr Stephen Kellett. It has not been submitted anywhere for any award. Where other sources of information have been used, they have been acknowledged.

Signature:  ……

Date: ……15 March 2016……

Abstract

Background: Variability in human performance is a naturally occurring phenomenon and applies to practitioners. Mainstream psychotherapy research has focused on treatments rather than practitioners and has viewed variability as error within the dominant paradigm of the randomised controlled trial.

Aims: To investigate variability via the role of practitioner personal qualities and their association with differential patient outcomes, their contribution to effective practice, and the extent these qualities vary with patient severity.

Method: A practice-based paradigm was adopted and sampled practitioners and data within a single Improving Access to Psychological Therapies (IAPT) service. The full sample comprised 42 practitioners – psychological wellbeing practitioners, counsellors, and cognitive-behaviour therapists – who completed measures of resilience, empathy, and mindfulness as well as provided qualitative accounts of their practice. A series of seven sequential studies utilised subsamples of the responses from these 42 practitioners, which were analysed prior to yoking with their patient outcome data to determine associations with more and less effective practice. Studies comprised mixed and integrated quantitative and qualitative analyses comparing benchmarking and multilevel modelling research methods (N=37) and thematic analysis (N=6).

Results: Significant variability in practitioner effectiveness was found. Practitioners' personal aspects were associated with patient outcomes and were influenced by their professional roles, level of treatment intensity provided, and their theoretical orientation. Practitioners' mindfulness and combined resilience and mindfulness were associated with better patient outcomes and this role increased as patient severity increased. In contrast, empathy did not differ between more and less effective practitioners, with more effective practitioners showing marginally lower levels of empathy.

Conclusion: Findings suggest that more effective practitioners do differ from less effective practitioners in the personal aspects they bring to their professional practice. Findings have implications for practitioner training and routine practice. The findings are limited in their generalisability and may only apply to IAPT services.

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ABBREVIATIONS

MLM	Multi-level modelling
PHQ-9	Patient Health Questionnaire-9
CD-RISC	Connor-Davidson Resilience Scale
BES-A	Basic Empathy Scale for Adults
MAAS	Mindful Attention Awareness Scale
PWP	Psychological Wellbeing Practitioner

Chapter 1

Variability as a phenomenon in the psychological therapies

"All organisms vary" – Thomas Henry Huxley: *Criticism on 'The origin of species.'*

1.1 Variability

Variability is a naturally occurring phenomenon that pervades everyone's life. Not only do all organisms vary, as observed by Thomas Huxley, but also so do people's abilities in carrying out everyday tasks, whether they be physical or cognitive. And variability is also apparent in people's emotional responses as people vary in the extent and intensity of their reactions. Hence, from a human perspective making observations about mankind, variability is omnipresent. And within the discipline of psychology, a fundamental premise is that there is variability, whether it is captured in the study of individual differences or in the principles of the normal distribution curve that acknowledges the natural spread of scores for any given variable.

The phenomenon of variability has pervaded the thoughts and writings of historical figures. In the discipline of medicine, Dr Joseph Bell (1837-1911) – a surgeon best known as an inspiration for the fictional character of Sherlock Holmes – showed an acute ability to appreciate variability between humans and, as such, make accurate deductions simply from observing a stranger. Charles Darwin's (1809-1882) theory of evolution stemmed from a passion for field biology (see *The Variation of Animals and Plants under Domestication* (1868, 1875) and was described as having an attention to details (i.e., an ability to notice variation) that other naturalists may have overlooked. Abraham de Moivre – an 18th century mathematician and statistician – noted the existence of variability in the outcome of coin flips that led to his discovery of the normal curve.

And within the field of the psychological therapies – the focus of the work reported in this thesis – variability is pervasive. While research articles often report on the characteristics of the average patient, practitioners will invariably retort that that there is no average patient – they all differ. And so also for practitioners, who practice from a range of differing models, with differing life

experiences and differing personal qualities that they bring to their craft. By contrast, the one common point for, presumably, all patients and practitioners is that they are all working in pursuit of the best outcome for the patient. The question then arises: how do we understand the contribution of the variability in practitioners – often referred to as therapist effects – to the outcomes of their patients? This apparently simple question is the focus of the work reported in this thesis.

1.2 Variability and psychotherapy research: Paul's famous (1969) question

Psychotherapy research has progressed within the context of empirical research. Psychotherapy – or the psychological therapies – is defined here as therapy based on psychological theories and principles. The term *psychological therapies* captures the pluralistic nature of the activity evident in over 250 distinct approaches in contrast to the singular term *psychotherapy*. This variety is to be expected given the variable nature of human interaction with commonalities of human distress, language, and conversation across cultures. Variability is also illustrated by Paul's classic question that prompts the consideration of many factors involved in the effective delivery of psychotherapy: *"What treatment, by whom, is most effective for this individual with that specific problem, under which set of circumstances, and how does it come about?"* (Paul, 1969). Indeed, Paul's famous question captures key components of variability that underpin the work reported in this thesis. These components include variability in: treatment approach, practitioners, outcomes, problems, and circumstances and asks the question: How does it come about?

However, Paul's question placed the focus on treatment and considered the other components in relation to it. The present work focuses on practitioners – the *by whom* in Paul's question – and investigates what practitioners bring to therapy sessions as part of their personal qualities (aspects) that contributes to our understanding of how more effective practice 'comes about' in the context of differing treatment approaches, differential outcomes, differing levels of patient severity, and under differing methodological applications. The following sections introduce each of these components in the context of a background to the work reported in this thesis.

1.3 *"What treatment…."*: Variability in psychological therapy practices and approaches

Psychological therapists who have pioneered distinct approaches have addressed this question in part with a focus on how psychological problems are conceptualised. Prominent approaches have been proposed. For example, Freud suggested that psychological problems were best conceptualised by theories of the unconscious mind (Freud, 1909; Freud, 1938). Rogers promoted a non-directive approach underpinned by key processes of empathy, genuineness, and unconditional positive regard (Rogers, 1957). Beck proposed that psychological problems were best explained by more specific irrational thoughts and/or reasoning (Beck, 1967; Beck, 1975). He emphasised having a relationship that enabled patients to discover their misconceptions themselves. The pioneering work of Freud, Rogers, and Beck in developing psychoanalytic, non-directive counselling, and cognitive therapy respectively, either directly or indirectly inform a substantive proportion of the psychological therapies delivered in the UK and elsewhere. The work presented in this thesis focuses on two of these therapies: non-directive counselling and cognitive therapy.

1.4 *"…by whom…."*: Variability across practitioners

Variability across practitioners is the key focus of the present thesis. While the majority of research and policy implementation to date has been focused on treatments – the classic horse race – the role of the practitioner has been, at best, marginalised in terms of research effort. However, accepting that variability is pervasive in all human performance leads naturally to the premise that variability is present across practitioners. Practitioners may indeed receive the same standardised training but their delivery of these standard therapeutic approaches will differ to some extent.

Accordingly, the central focus of the present thesis is on the personal qualities above and beyond therapy models that practitioners bring to therapy and are manifest as aspects of the person rather than the therapy model.

Individuals vary in their manner of communication. Psychotherapists, as individuals are likely to possess enduring interpersonal styles that may explain their manner of interaction with patients. This in turn is likely to have a direct bearing on how they are perceived by patients. Patients may experience some practitioners as very empathic, others as reflective, directive, expressive and/or

engaging. Patients may also experience differences in the robustness or resilience of therapists with some therapists appearing to be able to tolerate patients' pain more easily than others. And some practitioners may have a different experience of being 'with' their patients in terms of their (the practitioner's) relatedness to their surroundings – that is, their state of mindfulness as a person.

These differing aspects of empathy, resilience, and mindfulness are representative of states of the practitioner as a person and are the focus of the current work. But the aim is not to consider these personal aspects in and of themselves, but rather in their role when delivering effective practice.

1.5 *"… is most effective…"*: Variability and patient outcomes

Research into the effectiveness of psychological therapy practice has occurred at different levels of abstraction with differing associated methodological approaches. These include comparisons between specific techniques, between more common strategies (e.g., providing feedback to patients), between theoretical approaches (e.g., comparing cognitive behavioural therapy with psychodynamic therapy), and meta-theories (e.g., comparisons accounting for medical and contextual effects). Researchers have established that the psychological therapies work (Grissom, 1996; Lambert & Bergin, 1994; Lipsey & Wilson, 1993; Smith & Glass, 1977; Smith, Glass, & Miller, 1980). On average, people with substantial psychological difficulties who do receive psychotherapy are statistically and clinically better off than those who do not receive psychotherapy (Wampold, 2001).

However, it is not only whether therapies *per se* are effective, but also – crucially – whether and to what extent individual practitioners are effective. And one of the standard means of determining whether a therapist is effective is to compare their outcomes with a specified criterion – that is, a benchmark. The concept of a benchmark derives from artisans marking out a predefined length – for example, a yard – on their bench and then using this as a measure, a standard with which to compare other objects.

However, while the concept of a benchmark for individual practitioners has considerable appeal, it treats all therapists – and, most importantly, all their patients – as being the same. That is, it fails to take account of the complexities and differences between patients. This phenomenon is what is known as case-mix.

A further issue that is not taken into account in standard benchmarking approaches is the natural nesting of patient data. One assumption in data analysis has invariably been that data points for patients are independent. Hence, the statistical power required to determine the sample size has been determined at the patient level. However, the structure of the data is hierarchical rather than flat. That is, a therapist sees a number of patients and it is likely that the outcomes of those patients will be associated with each other and also differ from the patients seen by another therapist. In effect, patient data is clustered according to therapists. This hierarchical structure was initially noted in educational research, where children are nested within a classroom teacher, who is nested within a school. And the school is nested within a local authority. The work reported in this thesis takes account of both benchmarking strategies and also the hierarchical nature of data.

Alongside these issues, however, there is also evidence that a small proportion of patients (5-10%) deteriorate while engaged in treatment (Bergin, 1966; Bergin, 1971; Garfield & Bergin, 1978). These findings, together with increasing pressure on public health, a growing population, limited resources, and competing health needs within the wide medical arena, have alerted researchers of a growing need for evidence on the effectiveness of the psychological therapies.

Accordingly, the present thesis employs patient outcome data as the prime indicator of the effectiveness of the therapies delivered by individual practitioners representing contrasting therapies (i.e., counselling and cognitive-behaviour therapy).

1.6 **"… for this individual with that specific problem…": Variability within depression**

The term 'specific problem' leads to the issue of diagnosis, or at least a statement of the condition with which the patient is presenting. Of all conditions, depression is probably the most pervasive and prevalent. A report which was influential in promoting more accessible treatment for people with depression in the UK, identified that up to 16% of adults experience symptoms of clinical depression and/or anxiety (Layard, Clark, Knapp, & Mayraz, 2007). Out of these adults, only a quarter receive treatment leaving three quarters of adults to bear the burden of the treatable psychological condition. The significant prevalence of depression and/or anxiety was found not only to affect individuals and loved ones personally, but also contributed to the economic burden to the

country. Treatment provided to patients at variable levels of depression brought with it the benefit of preventing the worsening of patient suffering and preventing foreseeable enduring effects of health on personal, social, and economic wellbeing. The current thesis examines the delivery of treatment for depression within the context of variability of patients' depression severity.

1.7 **"…under which set of circumstances…."**

Although not addressing the original meaning of 'circumstances', this portion of the phrase provides the cue for the context of the therapy investigated in the current work. Research in the psychological therapies has adopted a number of distinct paradigms, originating historically with the case study and then progressing through the increasing adoption of designs that culminated in the randomised control trial (RCT), which has become the gold standard for evidence-based practice. However, an ongoing concern about RCTs has been how they relate to the real world of everyday practice. In contrast to evidence-based practice, the paradigm of practice-based evidence takes as its starting point the reality of everyday practice and aims to build up evidence from this base. Hence, rather than carrying out the research within a special research clinic or in a special setting, the work was carried out in routine practice with practitioners working with the patients they would naturally see in their work.

1.8 **"…*and how does it come about?"*: Researchers application of mixed methods, and practitioners application of their art of practice**

Contrary to Paul's question, researchers have faced questions concerning evidence on the essential therapeutic ingredients that can be applied to provide cost-effective and efficient care – questions that are more suitable for medical rather than psychological treatments. In medical treatment, specific therapeutic effects, in contrast to more general effects, are more easily ascertained focusing on patients' physiochemical markers. In the psychological therapies, however, all effects (specific and common) are measured according to changes in patients' psychological states. In 1995, the American Psychological Association Clinical Task force decided to set criteria for research, funding, and publications aligned with the medical model, thereby effectively moulding the psychological therapies to a more medical approach. Only the more structured treatments could be

captured, summarised, and characterised in treatment manuals. Research funding and publications favoured studies that implemented the use of treatment manuals. Randomised control trials (RCTs) were endorsed as a way of ensuring treatment approaches received the stamp of recognition as being evidence-based.

However, RCTs, by their experimental nature, controlled the variability of all factors (patient and therapist) excluding the treatment approach tested. A debate ensued between proponents of specific effects versus those of contextual effects. Proponents of the former position argued for the application of the *correct* approach as unique and essential for patient improvement while the latter argued for the application of the *best fit* as essential but not unique to specific treatment approaches. For example, the acceptance of a treatment rationale by a patient and therapist is more important than whether it has been scientifically proven.

Given the progress of empirical research in psychotherapy, it follows that there may be an over-reliance on empirically validated approaches, fuelled by concerns over the potentially harmful effects of psychological therapies if left unchecked. Empirical research on more endorsed structured therapies may in turn be utilised to control an inherently human venture, which by its very nature, is variable. On one hand, concerns are raised about a need to ensure humane and ethical practice given evidence concerning the effects of deterioration in therapy. On the other hand, concerns may be raised about decisions made that patients with certain conditions only receive specific treatment(s) due to what empirical evidence deems appropriate. Such decisions, give little regard to patients' preferences or orientations or treatments that by their very nature cannot be empirically validated.

The issue here reverts back to the medical model that sets the stage for a misattribution of patient change primarily to treatment approaches. Evidence from a study aimed at understanding and preventing the adverse effects of psychological therapies (AdEPT) found that patient deterioration was not specific to any therapeutic approach (Jackson, 2015). On the contrary there is growing evidence of systematic differences in therapist effectiveness, with some therapists showing consistently better patient outcomes and some therapists showing consistently less favourable patient outcomes. Evidence calls for more research to examine the contribution and potential differences

between therapists as opposed to research focusing on the differences between treatment approaches. The work reported in this thesis focuses on the former, namely therapists and the differences – variability – between them.

Looking from the therapists' perspective in their delivery of effective practice, the current research aims to examine the art of practitioners' delivery of their professional practice. "Art" is characterised here by practitioners' autonomy in how they apply treatment approaches while working with patients. Any structured training of practitioners is limited in its capacity to solely yield effective practice. In the context of providing therapy, practitioners are called on to provide immediate responses to varied nuances in patients, patient conditions, patient severity levels, patient-therapist dynamic, and the fit of approaches between patient and therapist. Personal aspects may be utilised, while practitioners deliver treatment approaches and it is these aspects that may be nurtured according to practitioners' background and/or routine life. The current research examines how practitioners vary in respect to their personal and professional lives and how they may apply themselves while working with patients.

1.9 Overview and structure of the thesis

The work reported in this thesis comprises seven interdependent studies and adopts a pragmatic approach by using both quantitative and qualitative methods of analyses. The methods are characterised by mixed as opposed to singular methods, integrated rather than separate methods, and contrasts between advanced and traditional methods of identifying practitioner variability. By utilising mixed, integrated, advanced, and traditional designs, the current thesis aims to identify robust findings and provide a more comprehensive explanation of variability in practitioners' effectiveness. The data for the seven studies is derived from practitioners who provide therapy in the Improving Access to Psychological Therapies (IAPT; Layard, 2006) service, which is a UK public health delivery system following nationally recommended guidelines. The studies focus on aspects of personal qualities that practitioners may utilise or draw on within their own person when treating patients.

In sum, the current thesis sets out to examine the phenomenon of variability in practitioner effectiveness based on more objective patient outcome scores. This variability in practitioner effectiveness is then further studied to explain whether more effective practitioners vary in their art of delivering structured and unstructured treatment approaches. Findings from variable methods (i.e., quantitative and qualitative analysis) are integrated to provide relatively more robust and comprehensive interpretation as opposed to utilising single, separate methods and contrasts are drawn between traditional and more advanced empirical methods. Accordingly, research findings are presented on i) practitioner variability, ii) the contributions of the personal aspects of interest, iii) how practitioners' contributions vary as a function of patient severity, and iv) the implications for professional practice, training, and future research.

The structure of the thesis is as follows. In this chapter (Chapter 1) – a general background to the concept of variability has been presented across key components embedded within Paul's classic question concerning psychotherapy. Chapter 2 then reports a pragmatic systematic review of recent therapist effect studies that serves as an introduction to the seven empirical studies. The seven studies comprise the following: Study I (Chapter 3) focuses on the personal qualities practitioners bring to their practice; Study II (Chapter 4) focuses on the association between personal qualities and patient outcomes using traditional single level statistical analyses; Study III (Chapter 5) addresses the same association but using multilevel modelling; Studies IV and V (Chapter 6) and Studies VI and VII (Chapter 7) apply qualitative research methods to build on the analyses from Study III. The final chapter (Chapter 8) discusses the findings from the seven studies in the context of the overarching question concerning the role of practitioners' personal qualities and their contribution to effective practice.

2 Chapter 2

A pragmatic systematic review of therapist effects and patient outcomes

2.1 Introduction

Research in the psychological therapies regarding the role and contribution of therapists to patient outcomes has been undergoing a significant methodological transition. Data is now being analysed using multilevel modelling (MLM) to study therapist effects as opposed to traditional single-level analysis. In statistical terms, greater recognition is being given to naturally occurring associations in data rather than assuming data to be independent. Specifically, it is recognised that patients of the same therapist share some similarity in their outcomes as compared to patients of a different therapist. This transition was reflected in *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change* (6th edition, 2013) in which Baldwin and Imel (2013) conducted a review of therapist *effects* in contrast to prior editions of the text that focused on reviews of research on therapist *variables*.

Baldwin and Imel (2013) provide a comprehensive summary of 71 studies of therapist effects, including post-hoc analyses, within the period of 1954 to 2011. In their summary, the authors identified the estimation procedure(s) used in each respective study; for example, whether the analysis for each of these studies adopted single level (e.g., ANOVA) or mulitilevel modelling procedures. To illustrate the methodological transition from more traditional analysis to multi-level modelling, the 71 studies reviewed by Baldwin and Imel (2013) are represented here by 10-year successive time periods and the proportions of single-level analyses calculated within each time period. Figure 2.1a presents the distribution of 54 studies over the 60-year period (1950s-2010) that used single-level analysis and shows a decreasing percentage of studies of therapist effects since the 1980s using this form of analysis. By contrast, Figure 2.1b presents the actual number of studies that used multilevel modelling and single-level data analyses from the 1950s to 2010 and shows an increase in MLM studies from the 1980s onwards. The trajectory suggests the increasing adoption of MLM analysis.

Figure 2.1a: Percentage of single level analysis studies

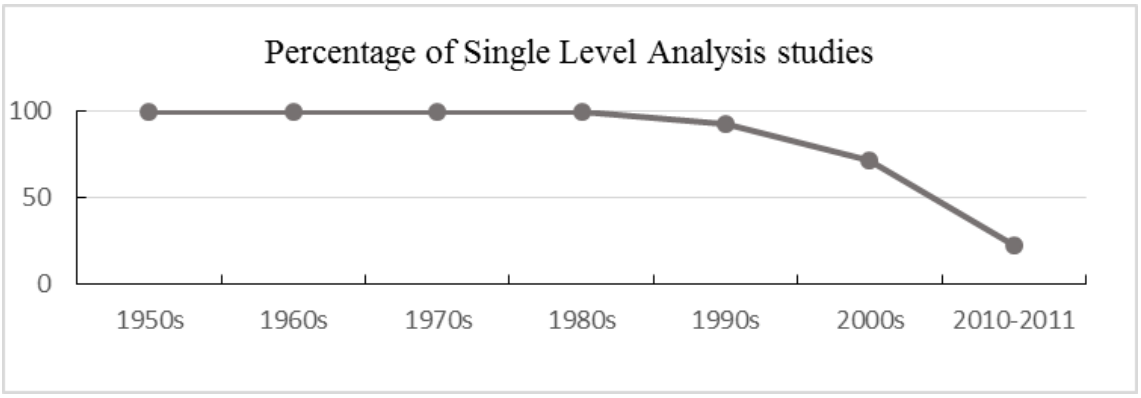
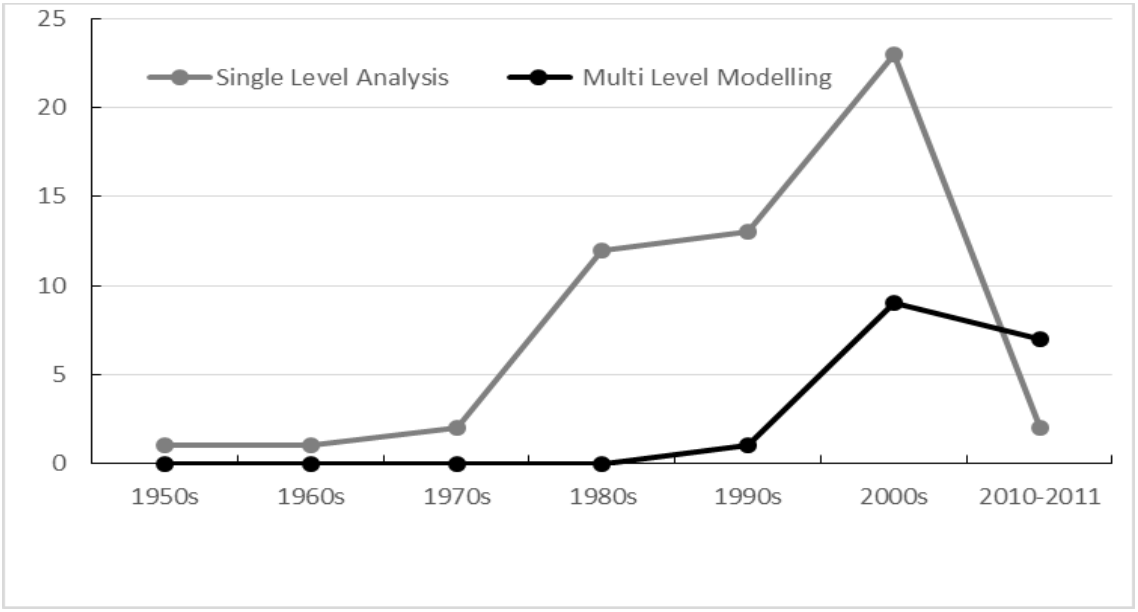


Figure 2.1b: Number of studies of therapist effects using single level analysis and MLM



The transition from single level to multilevel procedures is also reflected in the research literature. For example, there has been an extensive debate focusing on research methodology (Crits-Christoph & Gallop, 2006; Elkin, Falconnier, Martinovich, & Mahoney, 2006a; Elkin, Falconnier, Martinovich, & Mahoney, 2006b; Kim, Wampold, & Bolt, 2006; Soldz, 2006; Wampold & Bolt, 2006; Wampold & Bolt, 2007a; Wampold & Bolt, 2007b). There has also been a developing literature aimed at informing practitioners and researchers about the adoption of multilevel data analysis using simulation studies (e.g., Adelson & Owen, 2012; Minami, Brown, McCulloch, & Bolstrom, 2012; Roberts & Walwyn, 2013). In the context of this transition, the following paragraphs set out to provide an overview of areas where studies may vary, including observations made by Baldwin and

Imel (2013) following from their extensive review. These areas relate to the degree of reporting of descriptives on participants, concerns over inadequate sample sizes, and lack of consistency of statistical approach.

Within psychotherapy research, readers can readily anticipate gaining an insight into the demographic composition of patient participants (e.g., age, gender, ethnicity, illness). Information is often provided in line with recommended reporting standards (e.g., CONSORT; Altman et al., 2001; Moher et al., 2001; and JARS: JARS group, 2008). In the context of the transition from single to multilevel analyses, it would follow that demographic information would need to be provided not only for patients but also for practitioners who treat them. Demographic information would furthermore extend beyond personal demographics of practitioners to include descriptives related to practitioners' historical professional roles (e.g., work experience) and those that inform how practitioners' delivery of treatment may be routinely supported and/or enhanced (e.g., supervision and/or professional development). The current review examines the descriptive content and frequency provided on practitioner participants.

Baldwin and Imel (2013) criticised the lack of agreement regarding approaches to analyses and statistical procedures. The authors characterised the 71 studies they reviewed between fixed effect analysis comprising 25 studies (35%) and random effect analysis comprising 46 studies (65%). They highlighted that while fixed effect analyses were useful in providing estimates of differences between the specific therapists participating in a study, findings were only applicable to those participating therapists and did not provide a context of the effectiveness of those therapists within the broader population of therapists. Baldwin and Imel expressed a preference for random effect analyses to enable greater generalisability of findings. Of the 46 random effect studies they reviewed, 17 studies (37%) comprised those that adopted multi-level modelling analyses and 29 studies (63%) comprised those that adopted single level analysis employing ANOVA analyses. The current review provides an update on the proportion of studies that more recently have utilised MLM analyses when examining therapist effects.

Although Baldwin and Imel (2013) called for an increase in random effect analyses that includes MLM, such an increase necessitates a rigorous application of this complex statistical approach. In contrast to single level data analysis, MLM recognises naturally occurring associations that enables relatively more flexible applications to adapt to these associations, for example, in model design and model development. This flexibility of application has been shown to have a bearing on research findings.

A notable exemplar where MLM was differentially applied to one dataset, generating contrasting findings of therapist effects, was reported between two studies (Elkin, Falconnier, Martinovich, & Mahoney, 2006b; Kim, Wampold, & Bolt, 2006). The essential difference being the application of different levels of multilevel model designs: a 2-level versus a 3-level design. The former model generated significant effect sizes while the latter model generated non-significant findings. Kim et al. (2006) found therapist effects between 5-12%, substantiating this with findings that approached significance and several significant findings for two of the four psychometric measures used. Elkin et al.'s (2006b) therapist effect of 0-4% was not significant (i.e., indicating that differences between therapists' patient change rates were not large enough to have occurred by any other possibility than chance). It was argued that by specifically measuring patient change across time (Elkin et al., 2006b), within therapist variability was increased thereby reducing between therapist variability. The authors and commentators raised concerns over the small sample of therapists and patient data that was examined. The observation suggested that the findings were unreliable due to the lack of sufficient data. The current review sets out to provide an overview of how researchers have varied in their application of MLM analyses.

Inadequate sample sizes in studies constitute a consistent problem across extant reviews (Baldwin & Imel, 2013; Crits-Christoph et al., 1991; Crits-Christoph & Mintz, 1991). Sample sizes of therapists as well as the number of patients per therapist are used to generate multiple estimates of model parameters (fixed and random), as well as variance components and standard errors used to test model parameters. Relatively large numbers are necessary to obtain unbiased estimates for the random part (e.g., therapist effects) versus the fixed part (e.g., predictor coefficients) of a multi-level

regression model (Hox, 2010). Recommendations regarding sample sizes for patients (Level 1) and practitioners (Level 2) include the following: 30 practitioners with 30 patients per practitioner for fixed parameter estimates (expressed as 30/30; Hox, 2010; Kreft, 1996); 50 practitioners with 20 patients each for cross-level interactions; and 100 practitioners each with 10 patients for random effects (Hox, 2010). In general, statisticians recommend increasing the number of therapists as this strategy brings more benefits than increasing the number of patients per therapist (Heck & Thomas, 2009; Hox, 2010; Snijders, 2005).

Psychotherapy researchers have also addressed the issue of sample sizes in MLM studies. A recent large-scale naturalistic study examined the sample sizes required for MLM analyses of therapist effects (Schiefele et al., in preparation). The examination comprised an integrated sample of eight naturalistic datasets totalling 1,800 therapists who treated 48,648 patients. The importance of sample sizes on therapist effects values was reflected in findings showing that sample sizes accounted for 38% of the variance of mean therapist effect values and 48% of variation in confidence interval ranges. The authors provided a recommended range for sample sizes where one sample (e.g., practitioner sample) compensated for the other sample (i.e., patients per practitioner). Parameters of recommended sample sizes comprised either (a) many practitioners with few patients per practitioner (as low as four patients per practitioner), or (b) few practitioners (a minimum of 40) each with many patients. In Baldwin and Imel's (2013) review, four of 46 (8.7%) random-effect studies met the Schiefele et al. (in preparation) recommendations. The current review examines sample sizes of studies in relation to recommendations (Schiefele et al., in preparation).

2.2 **Rationale**

The following review is pragmatic as it serves two key functions. Firstly, it provides an update of studies building from the meta-analysis conducted by Baldwin and Imel (2013) in order to bring the review of the literature up-to-date (i.e., to 2015). Secondly, it provides a review only of those studies of therapist effects that are relevant to the framing and construction of the current thesis. Specifically, this review focuses on research that has identified therapist effects with particular attention to factors associated with effective practice. The review is important as it provides a

summary of how the current thesis addresses limitations and observations drawn from the pragmatic review.

In the studies included in their meta-analysis, Baldwin and Imel (2013) noted three key methodological limitations: (1) that the majority of studies had small sample sizes in relation to both the number of practitioners and the number of patients per practitioner; (2) where studies had larger sample sizes, these were often characterised by considerable heterogeneity among patients, thereby potentially masking differences between practitioners; and (3) there was a lack of agreement on the best statistical approach to analyse therapist effects. In addition, the reviewed articles are examined with respect to the reporting of practitioner descriptives and the methods used to examine the personal qualities that contribute to effective practice. Accordingly, the review focuses on the following five areas of study designs and reporting: i) practitioner descriptives, ii) patient heterogeneity, iii) statistical methodology, iv) sample size, and v) a review of studies that examined personal qualities associated with effective practice.

Following this sequence, the five research questions addressed in the review comprise the following:

1) What are the commonly provided descriptives of practitioners and what is the reporting prevalence of these? 2) What is the heterogeneous nature of patient samples in respect to patients' characteristics? 3) What is the prevalence of MLM analyses and how do researchers vary in their application of this procedure? 4) What are the studies that display sufficient sample sizes and describe how the samples vary between practitioner samples and patients' per practitioner samples? and 5) What are the personal qualities that have been examined and identified as associated with more effective practice?

2.3 **Method**

2.3.1 **Identification of articles**

A literature search was conducted with the aim of identifying articles published during the period January 2011 to February 2015 that contained quantitative findings on therapist effects.

Electronic databases were accessed (05/06 February 2015) through three search engines: PsycINFO via OvidSP, Scopus, and Web of Science (WoS). The search term *"therapist effect*"* was inserted as "*key concepts* OR *title*", "*topic* OR *title*", "*article title, abstract, keywords*" as provided by the respective search engines. PsycINFO, Scopus, and Web of Science identified 35, 57, and 54 citations respectively, providing a total of 146 citations. After removing duplicates, 74 citations remained.

2.3.2 **Selection of articles**

Inclusion criteria for the selection of articles comprised the following:

a) Published since 2011 to the current period (6 February 2015)
b) Published in the English language
c) Primary study/ies
d) Research related to individual face-to-face psychotherapy for psychological conditions
e) Results included standard therapist effects coefficients
f) Adolescent to adult participants (aged ≥ 15 years, consistent with patients of current studies)

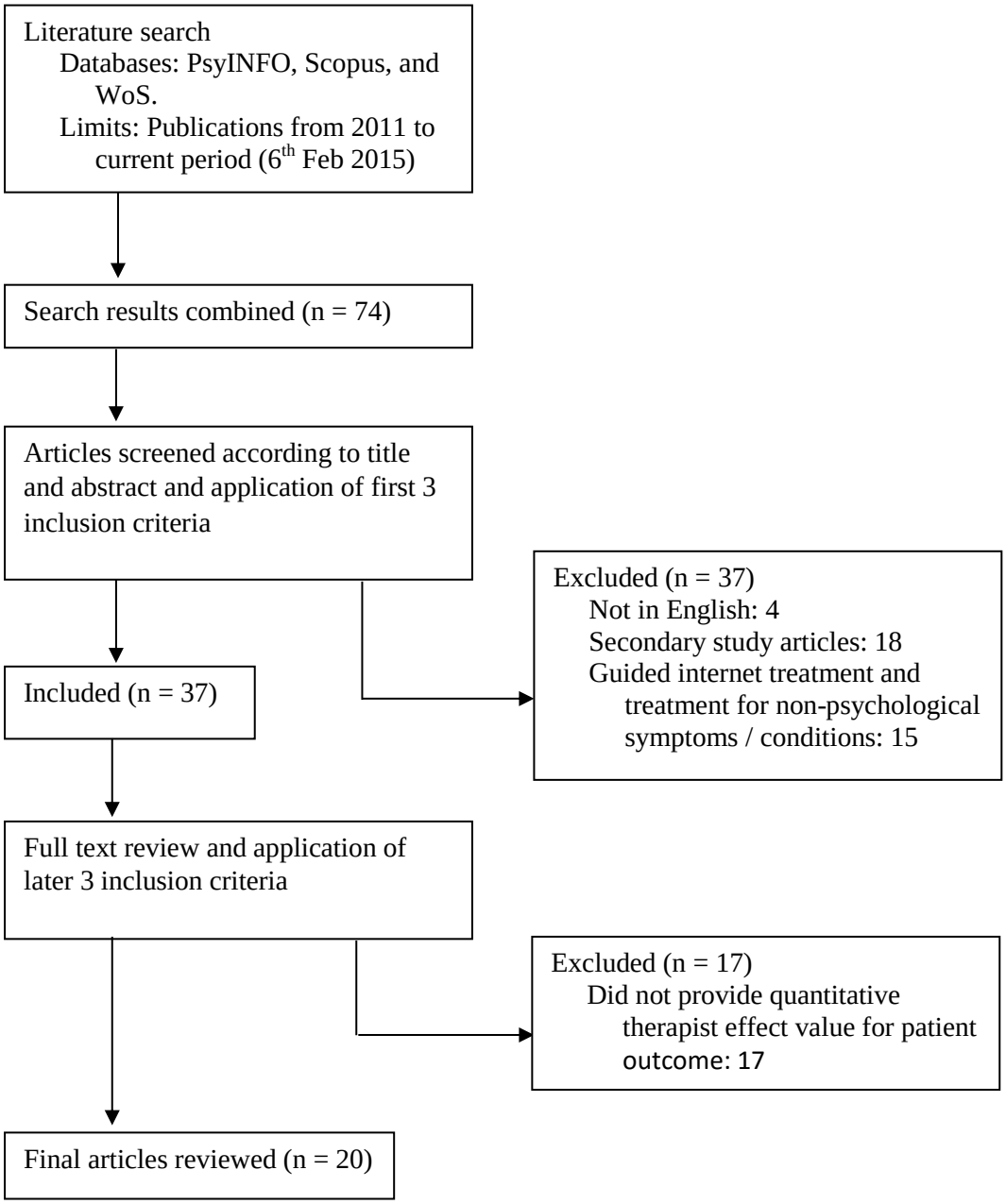
2.3.3 **Process of article selection**

The selection process of articles followed the guidelines provided by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA: Liberati, et al., 2009; Moher, Liberati, Tetzlaff, Altman, The PRISMA Group, 2009). Articles were included in the review if they met the above inclusion criteria. There were no specific exclusion criteria. Figure 2.2 presents the process of article selection in a PRISMA flow diagram.

After reading study titles and abstracts, four articles were discarded as they were not written in English, 18 articles did not constitute primary studies, and 15 did not focus on the provision of face-to-face psychotherapy for psychiatric disorders. The remaining 37 manuscripts were reviewed to identify whether findings provided a quantitative value of therapist effects on patient outcome. A total of 17 articles did not meet this criterion and were excluded. Given that only articles with therapist effects values were included, four articles that only reported non-significant findings

(without reporting therapist effect coefficients) were also excluded. The selection process yielded 20 articles for the pragmatic review. Details of the 74 articles are presented in Appendix I.

Figure 2.2: PRISMA diagram of article selection process



2.3.4 **Quality ratings of selected articles**

The 20 selected articles in the current review comprised 18 routine practice articles and two randomised control trial articles. Each article contained one study except for one randomised control trial that contained two studies (Huppert et al., 2014). Given the combination of both routine practice

studies and randomised control trial studies, a methodological quality criterion by Downs and Black (1998) was chosen to be used to rate the quality of the selected articles. Downs and Black (1998) designed a modifiable checklist that can be used for both randomised and non-randomised psychotherapy studies.

The procedure for attaining final rating scores followed several pragmatic stages. Firstly, all studies were quality rated using the full checklist of 27 questions designed by Downs and Black (1998). Secondly, items that did apply to all studies or did not enable a just comparison between studies (i.e., that elicited predominantly "not applicable" responses across the majority of routine practice studies with scores able to be provided only to randomised control trials) were removed as a criterion. The criterion questions that were removed comprised six questions: "Are the distributions of principal confounders in each group of subjects to be compared clearly described?"(Q 5); "Have all important adverse events that may be a consequence of the intervention been reported?" (Q 8); "Was an attempt made to blind study subjects to the intervention they have received?"(Q 14); "Were subjects randomised to intervention groups?"(Q 23); "Was the randomised intervention assignment concealed from both patients and health care staff until recruitment was complete and irrevocable?" (Q 24); and "Were losses of patients to follow-up taken into account?" (Q 26). Another modification was made to the scoring of studies power to detect clinically important effects. Given that all selected studies utilised MLM analyses, studies were either scored "0" or "1" if they contained a sufficient combination sample of practitioners and patients per practitioner as recommended by Schiefele et al. (in preparation).

Table 2.1 displays the quality ratings for each study across five columns representing the subscales designed by Downs and Black (1998). That is, ratings on i) sufficiency of reporting, ii) the extent of external validity of findings, iii) biases in measurement and outcome, iv) biases related to confounding, and v) power. Ratings are provided in relation to the total scores for each respective subscale with the extreme right column displaying the total quality rating across a possible total score of 21. See Appendix II for full ratings provided across all questions following Downs and Black (1998).

Table 2.1: Quality ratings of studies (modified Downs & Black, 1998)

Author (Year)	Downs and Black (1998) assessment of methodological quality (modified)							
	Routine Practice Study (RPS)/ Randomised Control Trial (RCT)	Reporting (Max=8)	External validity (Max = 3)	Internal validity (design bias) (Max = 6)	Internal validity (selection bias / confounds) (Max=3)	Power (Max=1)	Total (Max=21)	Sutdy ranking (Highest = 1, Lowest = 6)
1. Ali et al., 2014	RPS	4	1	4	2	0	11	5=
2. Artkoski & Saarnio 2012	RPS	4	0	3	3	0	10	6=
3. Erickson et al., 2012	RCT	4	0	5	3	0	12	4=
4. Green et al., 2014	RPS	7	1	5	2	0	15	1=
5. Hayes et al., 2014	RPS	4	0	4	2	0	10	6=
6. Huppert et al., 2014 (Study 1)	RCT	5	0	5	3	0	13	3=
(Study 2)	RCT	6	0	5	3	0	14	2=
7. Knuuttila et al., 2012a	RPS	7	0	3	3	0	13	3=
8. Knuuttila et al., 2012b	RPS	7	0	3	3	0	13	3=
9. Kraus et al., 2011	RPS	4	1	4	2	0	11	5=
10. Larrison & Schoppelrey 2011	RPS	6	1	4	2	0	13	3=
11. Laska et al., 2013	RPS	7	1	5	2	0	15	1=
12. Nissen-Lie et al., 2013b	RPS	6	1	4	2	0	13	3=
13. Owen & Hilsenroth 2011	RPS	7	0	6	2	0	15	1=
14. Owen & Hilsenroth 2014	RPS	7	0	6	2	0	15	1=
15. Owen et al., 2012	RPS	5	0	4	2	0	11	5=
16. Owen et al., 2011	RPS	6	0	4	2	0	12	4=
17. Owen et al., 2013	RPS	6	0	5	3	0	14	2=
18. Pesale et al., 2012	RPS	7	0	5	2	0	14	2=
19. Saxon & Barkham, 2012	RPS	6	1	4	2	1	14	2=
20. Werbart et al., 2013	RPS	6	1	4	2	0	13	3=

In relation to the sufficiency of reporting, all studies met at least half of the criteria and above (i.e., 4 or more out of a possible score of 8). Most studies described their research hypotheses, methods, and findings to a sufficient degree, for example by reporting variability estimates and probability values. Studies varied in the degree and clarity provided on interventions for patients. This could be partly explained by routine practice settings where practitioners may engage in a broad variety and/or mix of treatment approaches.

Ratings of external validity of findings were low across all studies despite the majority of studies comprising routine practice studies. All studies involved samples of patient data accessed through recruitment or archival datasets. Studies reported the selection criteria of their respective patient data and provided descriptions of the patient data however, did not report on patient sample representativeness of the population. Studies that obtained a rating of 1 out of 3 related to those that described the services provided as representative of those provided to the general public (for example, community mental health services).

In considering the internal validity of the measurement and outcomes across the studies, a notable observation can be made of the three studies with the lowest scores of 3 out of 6 (Artkoski & Saarnio, 2012; Knuutilla et al., 2012a, 2012b). The three studies comprised analyses on the same dataset and utilised naturalistic measures of patients' retention and abstinence in respect to the treatment of drug and alcohol use. Due to the unstructured nature of data collected and limited accounts provided on intervention, these studies displayed a relatively lower level of internal reliability.

All studies received a rating of 2 and above out of 3 in respect to their quality of taking account of potential confounds associated with selection bias. It is notable that a majority of 14 studies received a low rating for confounds associated with the extended time period of the datasets. This may be an artefact of routine practice studies where large datasets that span across an extended period of time (e.g., 2-3 years) are examined with limited account provided of possible variations associated with the extended time period.

In summary quality ratings across the 21 studies reviewed suggested studies of mildly varying quality with two studies scoring 10 out of 21 (Artoski & Saarnio, 2012; Hayes et al., 2014) and four studies scoring high at 15 out of 21 (Green et al., 2014; Laska et al., 2013; Owen & Hilsenroth, 2011; Owen & Hilsenroth, 2014). Quality ratings provide some measure of the reliability of findings although the ratings provided are not independent of artefacts related to study designs (e.g., issues related to large sample sizes for MLM, datasets spanning across extended time periods and naturally-occurring variability of treatment provided, and lack of treatment adherence monitoring for archival datasets). Review findings on the 20 articles are presented alphabetically and in the same order across all subsequent tables. This is to enable ease of reference between tables and to avoid issues related to chronologically ordering articles published within the same time periods.

2.4 **Results**

2.4.1 **Reporting of practitioner descriptives**

Across the 20 articles identified, researchers have given accounts of 9 descriptors of practitioners. These comprise practitioners' age, gender, ethnicity, experience, training, supervision, use of manuals/protocol, adherence, and orientation. Table 2.2 shows the identification of practitioner descriptors in the articles examined. The right-end column provides values (out of a maximum of 9) indicating the number of descriptors reported on practitioners. It is important to note that values provided do not indicate the content (e.g., whether practitioners were adherent or not to a specific treatment approach). Rather, the values indicate whether the authors of the articles provide an account of this descriptor of practitioner participants.

In 18 of the 20 articles (90%) reports were provided of practitioners' gender while 14 of 20 articles (70%) reported on practitioner training. 'Training' refers to articles where authors reported on specific training or indicated that practitioners were licensed (e.g., Kraus et al., 2011; Larrison & Schoppelrey, 2011). Less than half the articles (9 of 20; 45%) provided accounts on each descriptor of practitioners' age, ethnicity, and supervision. Where practitioners' ethnicity was accounted for, many articles (i.e., 5 of 9) had a central or related focus on the treatment of racial ethnic minority patients (Hayes et al., 2014; Larrison & Schoppelrey, 2011; Owen, et al., 2012; Owen, et al., 2011;

Owen et al., 2013). Thus, the reporting of practitioners' ethnicity may have been more a reflection of the specific hypothesis of the articles. Accounts provided of practitioners' supervision might also be less than indicated given that the articles counted include two RCTs (Erickson et al., 2012; Huppert et al., 2014) in which supervision of practitioners is attended to.

Table 2.2: Reporting of practitioner descriptives

	Accounts provided of practitioner demographic and related information									Score
Author (Year)	Age	Gender	Ethnicity	Experience	Training	Supervision	Manual	Adherence	Orientation	
1. Ali et al., 2014					•					1
2. Artkoski & Saarnio 2012	•	•		•	•				•	5
3. Erickson et al., 2012	•	•	•	•	•	•		•		7
4. Green et al., 2014	•	•		•	•	•	•			6
5. Hayes et al., 2014		•	•		•	•				4
6. Huppert et al., 2014	•	•		•	•	•	•	•	•	8
7. Knuuttila et al., 2012a	•	•		•	•				•	5
8. Knuuttila et al., 2012b	•	•		•	•				•	5
9. Kraus et al., 2011	•	•	•	•	•					5
10. Larrison & Schoppelrey 2011	•	•	•	•	•					5
11. Laska et al., 2013		•	•	•	•	•	•	•		7
12. Nissen-Lie et al., 2013b		•		•		•			•	4
13. Owen & Hilsenroth 2011		•			•	•	•	•		5
14. Owen & Hilsenroth 2014		•			•	•	•	•		5
15. Owen et al., 2012		•	•							2
16. Owen et al., 2011		•	•							2
17. Owen et al., 2013		•	•						•	3
18. Pesale et al., 2012		•	•		•	•	•	•		6
19. Saxon & Barkham, 2012										0
20. Werbart et al., 2013	•	•								2
Total	9	18	9	10	14	9	6	6	6	83

The least descriptors were provided for whether practitioners used manuals or not, their adherence to manuals, and their treatment orientation. The former two may be related as it is possible that practitioners in some articles did not use manuals and, consequently, practitioner adherence was

not applicable. Articles that provided three or less descriptors mostly reported practitioners' gender. Two of the 3 articles that provided the most number of descriptors comprised RCTs.

In summary, there is extensive variability in the reporting of practitioners as research participants. In more than half the article (13 of 20; 65%), authors consistently gave accounts of both practitioners' gender and training. Authors gave fewer accounts of elements that impact on practitioners' day-to-day working. These include manual use, adherence to treatment approach, and supervision. It appears that researchers assume and regard practitioners as professionals in their own right, having received necessary training. With this assumption in mind, it is possible that less consideration may be given to ongoing supervision and/or manual use as being significant in contributing to patient improvement.

2.4.2 **Patient heterogeneity**

Table 2.3 lists the reviewed articles with information on conditions treated and patient severity. Inspection of the 20 articles revealed varying methods of assessment adopted. These ranged from patients receiving a formal diagnosis (e.g., Laska et al., 2013) or being treated based on their presenting concerns (e.g., Hayes et al., 2014). Baldwin and Imel's criticism of heterogeneity of patient presentations for larger patient samples continues to hold true. For example, Kraus et al. (2011), Nissen-Lie et al. (2013b), and Werbart et al. (2013) used relatively larger samples of therapists but with multiple patient conditions being treated. Three articles, however, examined a relatively larger sample of therapists and/or sample of patients per therapist with more homogeneous patient conditions comprising depression and/or anxiety (Ali et al., 2014; Green et al., 2014; Saxon & Barkham, 2012). These three articles focus on treatment provided within the UK National Health Service. Ali et al. (2014) and Green et al. (2014) analysed the data of practitioners who provided brief low-intensity CBT within Improving Access to Psychological Therapies (IAPT; Layard, 2006) services, while Saxon and Barkham (2012) analysed data of primary care counselling and psychological therapy services that predated the IAPT service delivery programme.

Table 2.3: Articles of current review, extraction of sample size, design, patient condition and severity

Study	Sample size		Design	Condition(s)	Mean pre-treatment severity
	Practitioner	Mean patient per practitioner	Routine Practice study (RPS) or Randomised Control Trial (RCT)		
1. Ali et al., 2014	38	36.2 (1-109)	RPS	Depression and/or anxiety	Clinical (11.4, PHQ-9 ≥ 10) Clinical (10.5 GAD-7 ≥ 8)
2. Artkoski & Saarnio, 2012	33	9.91 Median 9 (1-20)	RPS	Alcohol and drug use	(not reported)
3. Erickson et al., 2012	10	9.1 (≥ 5)	RCT	Alcohol and drug use	0.02 days use of inhalents up to 4.36 days marijuana use
4. Green et al., 2014	21	53.55 (8-197)	RPS	Depression and/or anxiety	Clinical (13.17, PHQ-9 ≥ 10) Clinical (12.04, GAD-7 ≥ 8)
5. Hayes et al., 2014	36	6.33 (4 - 13) Mode/Median = 6)	RPS	Presenting problems included depression, anxiety, relationship issues and academic distress	(severity not reported) 61.4 (OQ-45, REM patients) 56.1 (OQ-45, White patients)
6. Huppert et al., 2014	S1: 14 S2: 17	S1: 13.07, (≥ 4) S2: 20.59 (> 3)	RCT	Panic disorder with or without agoraphobia	Patients met diagnosis of panic disorder with or without agoraphobia (initial severity level not reported)
7. Knuuttila et al., 2012a	33	9.91 Median 9 (1-20)	RPS	Alcohol and drug use	(not reported)
8. Knuuttila et al., 2012b	33	9.91 Median 9 (1-20)	RPS	Alcohol and drug use	(not reported)
9. Kraus et al., 2011	696	10	RPS	Multiple symptom domains including depression, panic/anxiety, sexual functioning, work functioning, social functioning, violence, substance abuse, psychosis, suicidality, mania	Included: 2.26 (TOP, Z score for depression) 1.90 (TOP, Z score for panic/anxiety)
10. Larrison & Schoppelrey, 2011	14	7	RPS	Diagnoses included depression bipolar disorder and schizophrenia	Diagnosed (1.25, BASIS-32)

11. Laska et al., 2013	25	8.3 (1-62)	RPS	PTSD	Clinical (60.45, PCL ≥ 50)
12. Nissen-Lie et al., 2013b	70	3.64 (≈ 5, 1-10)	RPS	Anxiety; affective disorders, somatization disorders, personality disorders	Severe distress (1.27, GSI ≥ 0.97)
13. Owen & Hilsenroth, 2011	23	2.96 (≥ 2)	RPS	Mood disorders, personality disorders and/or personality disorder related traits/features	Mild to moderate range of psychopathology (1.4, GSI)
14. Owen & Hilsenroth, 2014	28	2.5 (1-4)	RPS	Mood disorders, personality disorders and/or personality disorder related traits/features	Mild to moderate range of psychopathology (1.4, GSI)
15. Owen et al., 2012	44	7.54 (3-21) (all unilateral termination patients)	RPS	Patients with concerns of depression, disordered eating, anxiety, adjustment issues, anger, alcohol use, and relationship difficulties	(not reported)
16. Owen et al., 2011	31	4.61 (2-11)	RPS	Psychological wellbeing	(not reported) (2.67 = pre-therapy functioning, severity level not stated)
17. Owen et al., 2013	26	3.5	RPS	Presenting problems of adjustment, anxiety, relationship issues, eating disorders, depression and impulse control	Subclinical (3.97, SOS-10)
18. Pesale et al., 2012	23	2.96 (2-5)	RPS	All patients included regardless of disorder or comorbidity (excluded actively suicidal, and/or acute patients);	Mild to moderate levels of distress and impairment (1.06, GSI) (60.4, GAF)
19. Saxon & Barkham, 2012	119	90.64 (≥ 30)	RPS	Conditions included depression and/or anxiety	Clinical (17.5, CORE-OM ≥ 10)
20. Werbart et al., 2013	75	2.4 Median = 1 (1-23)	RPS	Presentations included mood disorders, anxiety disorders, personality disorders, co-morbid personality disorders.	1.37 (GSI for Remaining patients) 1.41 (GSI for dropout) 1.29 (GSI for incomplete tx)

Note: BASIS-32 = Behavior and Symptom Identification Scale-32; CORE-OM = Clinical Outcomes in Routine Evaluation-Outcome Measure; GAD-7 = Generalized Anxiety Disorder scale-7; GAF = Global Assessment of Functioning; GSI = Global Severity Index from the Symptom Checklist-90; OQ-45 = Outcome Questionnaire-45; PCL = PTSD Checklist; PHQ-9 = Patient Health Questionnaire-9; PTSD = Post Traumatic Stress Disorder; RCT = Randomised Control Trial; RPS = Routine Practice Study; SOS-10 = Schwartz Outcome Scale-10; TOP = Treatment Outcome Package

Heterogeneity of patients is also evident across patient severity levels. The 20 articles varied in the information provided on patient pre-treatment severity levels. Where reported, severity levels were indicated by patients' pre-treatment scores, by researchers' descriptions of patient severity levels, and whether patients received a diagnosis of the related condition(s). Table 2.4 shows 18 of the 20 articles (90%) that analysed patient data without conducting separate analyses on patients of different severity levels. Ali and colleagues (2014) as well as Saxon and Barkham (2012) found that therapists showed a greater degree of variability in effectiveness when providing treatment to patients with more severe depression and/or anxiety. Ali and colleagues (2014) studied patients who met the criteria of depression (PHQ $\geq$ 10) and anxiety (GAD-7 $\geq$ 8) and who had completed treatment for depression (PHQ-9; Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999; GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006). They found a therapist effect size of 7.2% and a relatively smaller effect size of 5.0% when treatment was provided to all patients (i.e., including those with less severe presentations and those who did not complete therapy). Saxon and Barkham found that therapist effects increased from 4% to a projected 10% as patient severity levels increased based on the CORE-OM scores of therapists with patients who completed treatment (CORE-OM; Barkham et al., 2001; Barkham, Mellor-Clark, Connell, & Cahill, 2006; Evans, et al., 2002). The therapist effect values for the two articles are contained in Table 2.4. Findings from both articles were consistent in reflecting how therapist effects increase as a function of increasing patient severity levels.

2.4.3 **Variations in method of multilevel modelling (MLM) analyses**

In contrast to Baldwin and Imel's (2013) criticism on the lack of agreement of analytical approach, the current pragmatic review found that most of the articles (95%; 19 of 20) used random effect analyses, an increase on the proportion of random effect analyses from Baldwin and Imel's (2013) review (35%; 46 of 71). Furthermore, most researchers adopted MLM analyses in all but one of the 20 articles (95%) in contrast to 29 of 71 articles (41%) that used MLM analyses in Baldwin and Imel's (2013) review. Although there is agreement on the broad application of MLM, variability exists in how it is applied.

Table 2.4: Articles of current review, study design, therapist effect coefficients and methodology

	Satisfies Recommended Sample Size	Randomised Control Trial (RCT) Routine Practice Study (RPS)	MLM / Single Level analysis	Therapist effects		Methodology (for therapist effects on patient outcome)
1. Ali et al., 2014	No	RPS	MLM	*(Recalculated)*: (3 level Uncond model) 6.7% (PHQ-9) 6.1% (GAD-7) (All patients) 5.0% (PHQ-9) 2.9% (GAD-7) (2 level Uncond) 8.6% (PHQ-9) 0.0% (GAD-7)	*(Recalculated)*: (3 level Cond model) 5.4% (PHQ-9) 5.8% (GAD-7) (Clinical patients) 7.2% (PHQ-9) 7.1% (GAD-7) (2 level Cond) 10.1% (PHQ-9) 10.2% (GAD-7)	3 levels & 2 levels; Uncond & cond. Models; Patient covariates; (pre-tx severity, age, gender, sessions, tx duration); Bayesian
2. Artkoski & Saarnio, 2012	No	RPS	MLM	(Uncond) 4.0% (Percentage of days abstinent at follow-up)	(Cond) 1.0% (Percentage of days abstinent at follow-up)	Uncond & Cond. Models; Patient covariate (pre-tx percentage of days abstinent))
3. Erickson et al., 2012	No	RCT	MLM	(frequency of substance use) - 27% (main effect across all therapists) - 29% (MET therapists) - ns (TAU therapists) (value not reported) (abstinence/non-abstinence) ns (value not reported) (main effect; MET therapists; TAU therapists)		General linear model; Cond model; Patient covariates (pre-tx drug use, pregnancy week, readiness for change)
4. Green et al., 2014	No	RPS	MLM	IGLS: 8.7% (PHQ-9) 8.8% (GAD-7)	IGLS & MCMC: 9.7% (PHQ-9) 9.8% (GAD-7)	2 levels; Cond model; Patient covariates (pre-tx depression, pre-tx anxiety, interaction between depression and anxiety); IGLS & MCMC estimation procedures

5. Hayes et al., 2014	No	RPS	MLM	8.7% (OQ-45)	2 levels; Cond model; Patient and therapist covariates (pre-tx, patient ethnicity, therapist ethnicity); Bayesian estimation
6. Huppert et al., 2014	No	RCT	MLM	Study 1: Multi-center collaborative study: 0.0% (PDSS-IE) 14.4% (ns) (ASI) Study 2: Longitudinal treatment study: 2.2% (ns) (PDSS-IE) 1.8% (ns) (ASI)	3 level models; Cond model; Patient covariate (pre tx severity); maximum likelihood estimation method
7. Knuuttila et la., 2012a	No	RPS	MLM	0 - 5.0% (Percentage of days abstinent)	Cond model; Patient covariate (pre-tx percentage of days abstinent, working alliance ratings at session 1 and 3)
8. Knuuttila et al., , 2012b	No	RPS	MLM	8 - 56.0% (Treatment retention)	2 level; Cond model; Patient covariate (pre-tx percentage of days abstinent, working alliance ratings at session 1 and 3)
9. Kraus et al., 2011	No	RPS	Single level analysis	Findings included the following: - For depression 67% therapists were effective, - For panic/anxiety 43% therapists were effective.	Practitioner effectiveness measured by reliable change index for practitioners' average patient.
10. Larrison & Schoppelrey, 2011	No	RPS	MLM	1.4% (BASIS-32) (Authors attribute to using a growth curve model)	3 levels; Cond model; Patient covariates (pre-tx severity, patient demographic and clinical variables)
11. Laska et al., 2013	No	RPS	MLM	11.7% (PCL)	2 levels; Cond model; Patient covariate (pre-tx severity)
12. Nissen-Lie et al., 2013b	No	RPS	MLM	28% (GAF) 4% (GSI) 21% (IIP-64)	3 levels; Uncond model
13. Owen & Hilsenroth, 2011	No	RPS	MLM	38% (PEI) 10% (ns) (GSI, controlling for baseline GSI).	2 levels; Uncond & Cond; Patient covariate (pre-tx severity)

14. Owen & Hilsenroth, 2014	No	RPS	MLM	37% (PEI) 17% (GSI-RCI)	2 levels; Uncond model
15. Owen et al., 2012	No	RPS	MLM	7.3% (patients' termination status)	2 levels; Cond model; Patient and therapist covariates (patient and therapist ethnicity and interaction between these); Bayesian MLM
16. Owen et al., 2011	No	RPS	MLM	Cond model (pre tx scores): 8.5% (SOS-10)	2 levels; Cond model; Patient covariate (pre-tx functioning score)
17. Owen et al., 2013	No	RPS	MLM	25.8% (SOS-10)	2 levels; Uncond model; Bayesian estimation
18. Pesale et al., 2012	No	RPS	MLM	36.3% (PEI) 11% (ns) (GSI-RCI)	Uncond model
19. Saxon & Barkham, 2012	Yes	RPS	MLM	IGLS: 6.4% (CORE-OM) IGLS & MCMC: 6.6% (CORE-OM) IGLS & MCMC: 4 – 10% (CORE-OM) Increasing effect size with increasing patient severity	2 levels; Patient and therapist covariates (patient severity and risk and therapist caseload); IGLS & MCMC estimation procedures
20. Werbart et al., 2013	No	RPS	MLM	3% (ns) (GSI) 2% (ns) (QOLI) 7% (ns) (SRH)	2 levels; Cond model; Patient covariate (pre-tx severity)

Note: ASI = Anxiety sensitivity Index; BASIS-32 = Behavior and Symptom Identification Scale-32; Cond = Conditional; CORE-OM = Clinical Outcomes in Routine Evaluation-Outcome Measure; RCT = Randomised Control Trial; RPS = Routine Practice Study; GAD-7 = Generalized Anxiety Disorder scale; GAF = Global Assessment of Functioning; GSI = Global Severity Index from the Symptom Checklist-90; GSI-RCI = Global Severity Index-Reliable Change Index; IGLS = Iterative Generalized Least Squares; IIP-64 = Inventory of Interpersonal Problems-64 ; MCMC = Markov Chain Monte Carlo; MET = Motivational Enhancement Therapy; PCL = PTSD Checklist; PDSS-IE = Panic Disorder Severity Scale – Independent Evaluator Version; PEI = Patient Estimate of Improvement; PHQ-9 = Patient Health Questionnaire; QOLI = Quality of Life Inventory; SOS-10 = Schwartz Outcome Scale-10; SRH = Self-Rated Health; TAU = Treatment as usual; tx = treatment; Uncond = Unconditional

Table 2.4 displays how studies vary in their therapist effect values and methodology. Multi-level models vary in their designs and construction: the number of levels, whether a model is unconditional or whether it contains covariates (i.e., patient and/or therapist covariates), and the estimation procedures applied. Differences in models applied and estimation procedures used have implications regarding the therapist effect values generated.

Scrutiny in Table 2.4 of the studies by Ali et al. (2014), Green et al. (2014), as well as Saxon and Barkham (2012) enable a specific focus on methodological issues that pertain to studies carried out in the UK. These studies examined data using different models and/or different estimation procedures. In Ali's study, effect sizes are seen to vary depending on whether models contained 2 or 3 levels, on patient severity levels (described above), and whether models contained covariates or not (i.e., unconditional or conditional models). Green et al. (2014) and Saxon and Barkham (2012) reported effect sizes using varying estimation procedures. Ali et al. (2014) examined therapist effects of samples derived from one dataset. Effect sizes for 2-level models were noticeably higher when compared to 3-level models on PHQ-9 scores (both condition and unconditional models). Also evident is that the inclusion of patient covariates is related to changes in therapist effect values in respect to both 3-level and 2-level models. Findings from Green et al. (2014) and Saxon and Barkham (2012) provide some evidence of variation in the magnitude of effect sizes while utilizing varying estimation procedures. Other articles reported using Bayesian estimation (Ali et al., 2014; Hayes et al., 2014; Owen et al., 2012; Owen et al., 2013) and Huppert and colleagues (2014) reported using maximum likelihood estimation procedures. These observations reflect that while there is agreement in using MLM, the manner in which models are designed and developed have implications for therapist effect values.

2.4.4 **Sample sizes**

In the current review, only one study met the sample recommendations of Schiefele et al. (in preparation), i.e., the study by Saxon and Barkham (2012). Table 2.5 provides relevant information of this study and four studies from Baldwin and Imel's (2013) review that met the same sample recommendations. The five identified articles displayed in Table 2.4 comprise routine practice

studies. Scrutiny of the sample size combinations within each study appear to reflect larger numbers of practitioners (with fewer patients) in contrast to smaller numbers of practitioners (with many patients). The general view is that there is greater value in having more therapists given the primary focus of the research to examine differences between therapists, rather than having more patients per therapist.

Table 2.5: Articles from Baldwin & Imel (2013) and current review that meet recommended sample sizes (i.e., minimum of 40 practitioners with many patients or many practitioners with a minimum of four patients per practitioner)

Study	Sample size		Treatment	Outcome	ICC	Other
	Practitioner	Mean Patient per practitioner				
Dinger et al., 2008	50	51.1	Inpatient	1. GSI 2. Impairment score	1. 0.03 2. 0.17	Estimated as a MLM; Post-treatment controlling for baseline
Lutz et al., 2007	60	20	TAU	1. MHI	1. 0.08; 0.17	Estimated as a MLM; 3-level model; First ICC is the ratio of therapist variance to all variance; Second ICC is the ratio of therapist variance to just patient variance.
Okiishi et al., 2003	56	21.1	TAU	1. OQ-45	1. 0.04	Estimated as a MLM; 3-level model; ICC is the ratio of therapist variance to patient variance.
Saxon & Barkham, 2012	119	90.6	Integrative treatment approaches	1. CORE-OM (pre and post treatment)	1. 0.064–0.078 2. 0.01-0.10	2 Level MLM; First ICC values reflect range for average patient severity; Second ICC values reflect range of values as patient non-risk score increased.
Wampold & Brown, 2005	581	9.7	TAU	1. LSQ	1. 0.05	Estimated as a MLM: Post-treatment controlling for baseline

Note: ICC = Intra-class correlation coefficient; CORE-OM = Clinical Outcomes in Routine Evaluation-Outcome Measure; GSI = Global Severity Index from the Symptom Checklist-90; LSQ = Life-Status Questionnaire; MHI = Mental Health Index; OQ-45 = Outcome Questionnaire-45; TAU = Treatment as usual

2.4.5 **Research on features of effective practitioners**

Three published articles (see Table 2.6) have extended their analyses of therapist effects to examine features of practitioners who deliver effective practice: Green et al., (2014), Laska et al., (2013), and Nissen-Lie et al., (2013b). Each study comprised data from naturalistic settings, drawing from data of national-level government initiatives in the UK (Green et al., 2014), USA (Laska et al., 2013), and Norway (Nissen-Lie et al., 2013b).

Nissen-Lie and colleagues (2013b) published a study of practitioners working in a service delivery system designed with very few controls. This is a notable difference compared to the studies by Laska et al. (2013) and Green et al. (2014) that contained greater systematic controls on the treatment provided, training, and supervision. Practitioners provided open-ended psychodynamic-informed outpatient treatment to patients presenting with a broad range of conditions (including depression and anxiety). Patient conditions were measured to be severe using the Global Severity Index (SCL-90-R; Derogatis, 1983).

Laska and colleagues (2013) published a study of practitioners in a naturalistic setting where an evidence-based treatment was implemented. Practitioners were trained by two national cognitive processing therapy (CPT) trainers, one of whom provided regular supervision to all practitioners. Data was examined for practitioners who provided 12 sessions of CPT following a manualised 12-session psychotherapy programme to war veterans diagnosed with PTSD. Patients presented with PTSD symptoms averaging above clinical levels using the PTSD Checklist (PCL; McDonald & Calhoun, 2010; Weathers, Litz, Herman, Huska, & Keane, 1993).

Green et al. (2014) analysed a sample of practitioners in a naturalistic setting where brief treatment was characterised by 'low contact-high volume' as opposed to 'high contact-low volume' patient interventions. Practitioners primarily 'coached' many patients using traditional face-to-face and non-traditional means (e.g., telephone contact and/or e-clinics). Data for practitioners who delivered more than 2 sessions were examined. Brief treatment was provided (usually 6 - 8 sessions) to patients with mild to moderate levels of anxiety and/or depression. Treatment followed seven core self-help treatment protocols based on cognitive behaviour therapy.

Across these three articles it is evident that systemic differences exist between practitioner and patient samples. These include a variety of patient conditions treated, the treatments provided, patient severity levels, and treatment duration. In addition, and related to the different datasets, researchers applied differing research designs, adopting quantitative (Nissen-Lie et al., 2013b), qualitative (Laska et al., 2013), or mixed qualitative and quantitative methods (Green et al., 2014), while studying data on practitioners' features from different sources (i.e., practitioners' self-report and/or supervisors' accounts).

Table 2.6 presents a summary of the findings from the three articles highlighting notable similarities and differences regarding features of more effective practitioners. Findings suggest that more effective practitioners may more readily convey that there is room for them to continue to develop, contrary to displaying a self-view of being an established expert. This is suggested by findings across the three articles by both supervisor and practitioner accounts. Supervisors indicated that more effective practitioners were "open to discussing difficulties" (Green et al., 2014) or "examining their contribution to impasses" (Laska et al., 2013). In addition, practitioners' self-ratings indicated lower self-appraisals of Advanced Relational Skills and higher self-appraisals of Professional Self-Doubt (DPCCQ; Orlinsky et al., 1999). Findings from Green et al. (2014) and Laska et al. (2013) identified that more effective practitioners were adaptive in response to patients, while adherent to varying degrees to the protocol or manual. Practitioners who delivered treatment to less severe patients reported remaining consistent with the treatment protocol (Green et al., 2014). In contrast, practitioners treating more severe patients were described by the supervisor in Laska et al.'s (2013) study as primarily attending to interpersonal interactions with flexible adherence to protocol, but remaining consistent with the core principles of the treatment manual.

Design qualities of the articles are shown in Table 2.6 (in the column titled *Practitioner qualities examined*). All three articles utilised MLM analysis to examine therapist effects. In addition Green et al. (2014) and Laska et al. (2013) used qualitative analysis: the former interviewing practitioners and their supervisors, with the latter interviewing a supervisor who was able to accurately identify more effective practitioners, while blind to the identities of therapists.

Table 2.6: Articles on practitioner qualities that contribute to effective practice – descriptives and findings

Author (Year)	Treatment type (# of sessions)	Type of Practitioner and orientation	Practitioner training	Practitioner supervision	Manual (or guidelines)	Treatment adherence monitoring	Practitioner qualities examined	Personal qualities related to more effective practice
1. Green et al. 2014	Low intensity Cognitive Behavioural Therapy (CBT) – brief treatment (typically 6-8 sessions)	PWP staff (including Support worker, MH nurse, assistant psychologist, OT)	Yes (mean experience 3.5yrs, 0-17yrs)	Yes	Yes (7 core self-help treatment protocols)	Not stated	Design: - MLM analysis - Quantitative and qualitative analysis of practitioner features o Practitioners and supervisors Study of practitioner qualities: - Ego strength - Intuition - Resilience	*Practitioners:* -Resilient -Proactive in gaining skills -More confident in clinical method -Clear communication with patients -Adaptive to patients while consistent with protocol -Adaptive to role within system *Supervisors:* -Openness to discuss difficulties -Organised -Proactive
2. Laska et al., 2013	Cognitive Processing Therapy for PTSD (CPT) (12 sessions)	- Staff (Psychologists, SWs) -Trainees (psychologists, clinician or counsellors)	Yes (mean experience 8.11yrs, SD = 6.3; 1-21yrs)	Yes (by national CPT trainers)	Yes (Manualised 12-session psychotherapy)	No	Design: - MLM analysis - Qualitative analysis o Supervisor Aim to identify a supervisor's criteria related to accurate identification of effective practitioners.	*Supervisor:* -Having experience (in reducing patient avoidance) -Language in supervision o Willingness to discuss struggles o Receptive to feedback -Flexible interpersonal style o Validates and challenges patients o Flexible adherence to protocol. Adaptive to patients while consistent with core principles of manual. -Builds strong alliance o Genuine o Ability to really listen

3.	Nissen-Lie et al., 2013b	Psychodynamically-influenced or eclectic treatment comprising: -Open ended (mean 51) (1 – 364) -Time-limited (40)	Staff (psychologists, psychiatrists, physiotherapists, psychiatric nurses) Trainees (psychologists and psychiatrists)	Yes (mean experience 10 yrs) (SD = 6.57)	Yes (for grad students) (rest unknown)	No	Not stated	Design: - MLM analysis - Quantitative analysis of practitioner features o Practitioners Study of practitioner qualities: -Professional Self Doubt -Negative Personal Reaction -Advanced relational skills -Warm interpersonal style	*Practitioners:* -Lower self-ratings of Advanced Relational Skills (ARS) predictive of higher objectively-rated patient functioning across time -High Professional Self-Doubt (PSD) predictive of more reduction of interpersonal distress across time -Specific to patients with high (versus lower) interpersonal distress o Lower ARS predictive of more reduction of both global symptoms and interpersonal distress across time

Note: CBT = Cognitive Behaviour Therapy; CPT = Cognitive Processing Therapy; MH = Mental Health; OT = Occupational Therapist; PTSD = Post Traumatic Stress Disorder; SW = Social Worker

(For further information regarding the contribution of each study, the study setting, patient diagnosis and treatment, see Appendix III)

Nissen-Lie et al. (2013b) used MLM analysis to examine specific practitioner features. While all articles provided unique findings, Green et al. (2014) used a novel mixed-method approach. Both quantitative and qualitative data were obtained from the same practitioners, thereby enabling closer inferences to be drawn based on having closely related findings.

2.4.6 **The contribution of the current thesis**

Table 2.7 provides a summary on how the seven studies comprising the current thesis address the observations and limitations identified in the review of therapist effects research described above.

Table 2.7: Key observations identified from the pragmatic review and associated studies

Limitations / Observations	Study and how addressed
Heterogeneity of patient diagnosis	- *Studies I - V* examine patient outcomes in the treatment of depression in a homogeneous sample of patients with depression and anxiety
Heterogeneity of patient severity	- *Study II* demarcates patients based on pre-treatment depression scores, across four severity levels ranging from mild to severe depression. The different patient groups are further examined for therapist variability in effectiveness in order to study features associated with more effective practice for each respective patient severity group.
Variability in methodology	- *Studies II & III* enable a comparison between traditional single-level analysis and multilevel modelling using the same patient dataset - *Studies III & VI* set out to report on the multi-level model design, its development and empirical basis on which decisions were made to derive a final model
Limited reporting of practitioner descriptors	- *Studies II & IV* provide demographic tables on practitioner participants
Study design related to examining practitioner features	- *Studies II & III* adopted a quantitative approach to analysing practitioner aspects. - *Study VII* reflects a mixed-method approach of analyses combining findings from practitioners' quantitative responses on their personal aspects with personal indicators identified from their qualitative responses.

2.5 **Overview of current thesis**

The aim of the research reported in this thesis is to investigate the personal aspects that psychological therapists bring to their practice, which has a differential effect in yielding better patient

outcomes (i.e., more effective practice). More specifically, two questions are key: (i) what are the differentiating personal aspects between more and less effective practice, and (ii) how do these personal aspects yield better patient outcomes. The current section provides an overview of the sequence of seven independent but interrelated studies that address the aims of the thesis and define the purpose and analyses of each separate study (see Figure 2.3).

2.5.1 **Study I: Practitioners' personal aspects**

The focus of Study I was an investigation and associated selection rationale of three practitioner aspects (i.e., resilience, empathy, and mindfulness), each of which was operationalised in terms of practitioner responses to validated measures of the selected constructs. There were two aims, (1) to determine the distribution of scores of the key aspects in a sample of practitioners, and (2) to identify the empirical relationships between the three aspects. This study therefore provided an empirical platform upon which to inform the inclusion of these aspects in the subsequent studies.

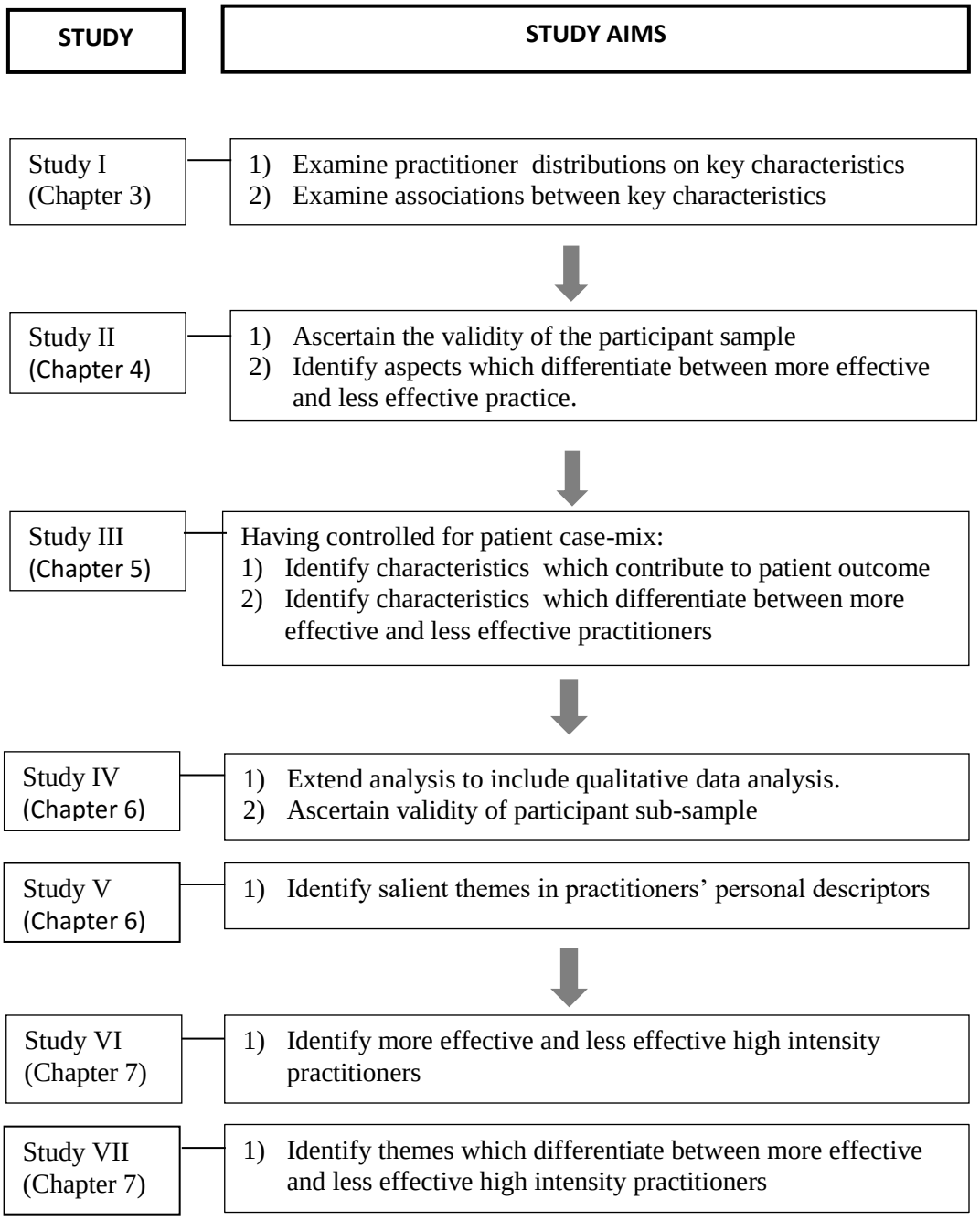
2.5.2 **Study II: Aspects unique to more effective practice: Single level analysis**

Study II comprised a sub-sample of practitioners from Study I who provided practitioner aspect data that could be yoked with patient outcome data from the same practitioner. There were two aims for Study II: (1) to ascertain the validity of the sub-sample against that of the total sample; and (2) to identify aspects that differentiated between more effective and less effective practice. Patient outcome data was treated as single-level data.

2.5.3 **Study III: Aspects unique to more effective practice: Multilevel modelling**

Study III used the same data as Study II but employed multilevel modelling (MLM) to present a more sophisticated analysis of the data, taking into account the naturally occurring hierarchical structure of the data. In addition, patient case-mix was also considered in the analysis. This study (1) aimed to identify the contribution of each practitioner aspect towards patient outcome, and similar to Study II (2) to identify aspects that differentiated between more effective and less effective practice.

Figure 2.3: Flow Chart of studies



2.5.4 **Study IV: High-intensity versus combined high and low-intensity respondent samples**

Study IV examined a sub-sample of practitioners from Studies II and III. This study sought to ascertain the validity of the analyses of high intensity practitioners only as a subsample of the total sample comprising both high intensity and low intensity practitioners. This study marks the beginning of subsequent qualitative analyses.

2.5.5 **Study V: Identification of themes**

Study V aimed to identify what high intensity practitioners considered as salient personal descriptors that they bring to their practice. Study V comprised preliminary analyses to address the question of what differentiates more effective from less effective practice by examining practitioners' own personal accounts. The analyses generate a helicopter view of recurring themes within practitioners' accounts.

2.5.6 **Study VI: Identification of more and less effective high intensity practice using MLM analysis**

Study VI consistent with Study III, employed MLM analysis to examine patient data of high intensity practitioners. Models were developed containing variables to control for practitioners' patients' initial severity levels and patient case-mix. Using the models, more effective and a less effective practitioner groups were identified.

2.5.7 **Study VII: Practitioner themes unique to more effective practice**

Study VII is a qualitative study that extends from Study V as it uniquely examines only more and less effective high intensity practitioners. Findings from Study V were utilised to identify thematic differences between the more effective and less effective high intensity practitioners.

2.5.8 **Reporting approach on findings**

The current research comprises a series of exploratory studies. This approach has been adopted in the context of the limited research that has been conducted on therapist personal qualities associated with effective practice based on measurable patient outcome scores. The reported findings, as such, identify statistically significant findings that occur at a probability of $\leq .05$, irrespective of the number of comparisons conducted.

3 Chapter 3

Study I: Practitioners' personal qualities

3.1 Introduction

The research reported in this thesis focuses on three inherent personal qualities – aspects – of practitioners that might be considered to contribute to a practitioner's presence with their patient and that might also be expected to differ between practitioners. The personal aspects of resilience, empathy, and mindfulness are selected given evidence of how these aspects are associated with wellbeing (Bajaj & Pande, 2015) and practitioners' delivery of effective practice (Green, Barkham, Kellet, & Saxon, 2014; Greenberg, Elliott, Watson, & Bohard, 2001; Grepmair et al., 2007; Ryan, Safran, Doran, & Moran, 2012). Research on practitioners' personal qualities associated with measurable effectiveness is currently in its infancy. These three personal aspects are hypothesised to account for some of the differences in practitioners' patient outcomes, in the context of other personal aspects to be examined in future research. The following sections summarise the personal aspects of resilience (Section 3.2), empathy (Section 3.3), and mindfulness (Section 3.4). They report the rationale and supporting empirical evidence underpinning the selection of these personal aspects and address issues related to their conceptualisation, operationalization, and measurement. In addition, research across the three personal aspects have highlighted a relationship between resilience and mindfulness that is further presented in Section 3.5.

3.2 Resilience

Research focusing on resilience began during the 1960s and 1970s and predominantly considered this personal aspect within the field of developmental psychology (Garmezy, 1971; Pangallo, Zibarras, Lewis, & Flaxman, 2014; Rutter, 1985; Windle, 2011). It later broadened to include research in adults experiencing a wide range of adversity/stressors; for example, within the disciplines of teaching and mining (Fiscor, 2012; Gu, 2014), and with empirical studies of resilience also carried out within the health professions including nursing (Ablett & Jones, 2007; Larrabee et al., 2010; Zander, Hutton, & King, 2010), and psychotherapy (Clark, 2009; Cummins, Massey, & Jones,

2007). For reviews of resilience in health professions, see Hannigan et al., (2004) and McCann et al., (2013).

3.2.1 **Resilience and effective practice**

Green, Barkham, Kellett, and Saxon (2014) conducted a study of 21 practitioners who provided low-intensity self-help interventions (i.e., psychological wellbeing practitioners, PWPs) to a total of 1,122 patients presenting with mild to moderate levels of depression and anxiety. Patients' scores of depression (Patient Health Questionnaire, PHQ-9; Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999) and anxiety (Generalised Anxiety Disorder measure, GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006) were analysed using multilevel modelling to identify and group practitioners who demonstrated either more effective or less effective practice. Practitioners' completed a measure of resilience, the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). Their scores were yoked to their effectiveness groupings as determined by the outcomes of their patients. Results showed effective practice was associated with significantly higher levels of resilience in contrast to less effective practice. Green et al. (2014) constitutes only one (known) study that has examined resilience in relation with effective practice. Findings have limited generalisability associated with the limited sample size of practitioners studied, and the treatment provided that is found exclusively within the UK public health service. Given significant findings despite study limitations, it is important to further examine and verify the contribution of resilience to better patient outcomes. The current thesis (Studies II and III) examines a heterogeneous sample of practitioners who include a sample of PWPs.

3.2.2 **Resilience, wellbeing, and impact on professional practice**

A practitioner is unlikely to be able to consistently provide the best professional help if the process of doing so results in burn out. Resilience has been highlighted for its role in contributing to a person's psychological wellbeing. For example, in their review of research on resilience and mental health, Davydov, Stewart, Ritchie, and Chaudieu (2010) found that resilience was viewed by researchers as a factor that not only reduces harm (Netuveli, Wiggins, Montgomery, Hildon, & Blane, 2008; Yehuda & Flory, 2007), but also protects (Collishaw et al., 2007; Quinton, Rutter, & Liddle,

1984) and promotes a person's mental health (Ong, Bergeman, Bisconti, & Wallace, 2006; Patel & Goodman, 2007).

The role of the practitioner has been recognised with its multitude of challenges (Barnett, Baker, Elman, & Schoener, 2007). These include a combination of clinical components (e.g., working with challenging patients with Axis II psychopathology, patients with severe and/or chronic difficulties, suicidal patients) and also professional and performance-related tasks (e.g., demonstrating utility of practice via patient recovery rates, administrative duties, and requirements of professional registration boards). In light of the many roles and responsibilities, practitioners are known to experience emotional challenges, anxiety, emotional exhaustion, and depression (Arvay & Uhlemann, 1996; Coppenhall, 1995; Linehan, Cochran, Mar, Levensky, & Comtois, 2000; Radeke & Mahoney, 2000), as well as occupational burnout (Rosenberg & Pace, 2006; Steel, Macdonald, Schröder & Mellor-Clark, 2015).

The impact of practitioners' psychological distress on patient care has been acknowledged by practitioners, researchers, and, some evidence suggests, patients themselves. A third of 749 practitioners who participated in a US national survey acknowledged that their personal distress reduced their quality of care with 4.6% reporting having subsequently provided inadequate treatment (Guy, Poelstra, Tamura, & Stark, 1989). A meta-analysis by Beutler and colleagues (2004) examined nine studies of practitioners' emotional well-being published between 1980 and 1999. Studies comprised patient sample sizes ranging from 33 to 718 and consistently indicated a positive relationship between practitioner well-being and patient outcome. This finding was consistent irrespective of the heterogeneous nature of patient (mixed diagnosis) samples, the range of psychological therapies provided (e.g., cognitive behavioural and psychoanalytic), and the different forms of treatment (i.e., whether group or individual therapy). Findings were suggestive of a robust association with effect sizes (r) ranging from up to .71 with a mean effect size of .12. A longitudinal study by Nissen-Lie and colleagues (2013a) further provided evidence of the direct impact of practitioners' personal distress on the therapeutic working alliance. The study investigated a multi-disciplinary sample of 70 practitioners who treated 227 patients presenting with anxiety and affective

disorders including personality disorders. Findings suggested that patients were particularly sensitive to practitioners' personal life distress, more so than practitioners themselves and the impact this had on the therapeutic working alliance.

3.2.3 **Conceptualisation, operationalisation, and measurement**

Researchers in general agree that resilience constitutes a positive adaptation to adversity (Herrman, Stewart, Diaz-Granados et al., 2011; Pangallo et al., 2014; Rutter, 1985; Windle, 2011). However, there is no consensus in terms of a general operational definition. Resilience has been conceptualised using differential theoretical frameworks/models (e.g., Garmezy, 1971; Pangallo et al., 2014; Richardson, 2002; Rutter, 1985; Zuroff, 1992). Models have been developed from differing perspectives, including viewing individuals as products of their environment to autonomous contributors of their environment.

Theoretical models initially comprised mono-causal models (e.g., where resilient children, then labelled 'invulnerable', were described as having fixed qualities of resilience; Garmezy, 1971; Rutter, 1985). Mono-causal models progressed into 'interactionistic' models that incorporated multiple systems and which recognised that people are not solely subject to but actively create their environment (Pangallo et al., 2014; Zuroff, 1992). With this shift from a relatively narrow and static model to broader more dynamic models, some researchers have argued that related stable personality traits are not suitable for inclusion in the model, given that a person's resilience changes across their lifespan (Pangallo et al., 2014; Windle, 2011). This conceptual argument may appear in opposition to the measurement and interpretation of resilience in the current thesis as a relatively more stable personal aspect. It is noteworthy to consider that the resilience measure adopted, the CD-RISC predates current interactionistic models and is relevant to the aim of the current thesis, namely to examine personal aspects as a function of practitioners' personal and professional day-to-day lives.

Measures of resilience have been developed to more appropriately assess the phenomena in clinical samples (Multidimensional Trauma Recovery and Resiliency Scale: Harvey et al., 2003; Trauma Resilience Scale: Madsen & Abell, 2010; Brief Resilient Coping Scale: Sinclair & Wallston, 2004), and in context of adult development-related adjustments (Resilience in Midlife Scale: Ryan &

Caltabiano, 2009; Resilience Scale: Wagnild & Young, 1993). Resilience has been measured as a personality feature (e.g., Baruth Protective Factors Inventory: Baruth & Carroll, 2002; Personal Views Survey: Maddi, et al., 2006), as ego-related feature (e.g., Ego Resiliency-89: Block & Kremen, 1996; Revised Ego-Resiliency 89 Scale: Alessandri, Vecchione, Caprara, & Letzring, 2012), and as a measure of resources in the face of stress (Resilience Scale for Adults: Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003; Brief Resilience Scale: Smith et al., 2008). The CD-RISC has been systematically reviewed together with other resilience measures (including those named above) against an interactionistic theoretical framework (Pangallo et al., 2014). The measure has been found to display partial conceptual adequacy with interactionism. Items comprising the measure take into account the interaction of multiple systems (i.e., internal and external resources). However, they do not include developmental influences (i.e., sociocontextual and demographic features) of the person on resilience, an observation that is not likely to have a considerable impact on the application of the CD-RISC to the current research.

The CD-RISC was adopted for the current thesis as a suitable measure of resilience as a day-to-day personal aspect. The measure has demonstrated sensitivity when used to study health care professionals (Gillespie, Chaboyer, & Wallis, 2009; Green et al., 2014). The measure was also selected to ensure consistency with the earlier work of Green et al. (2014). During the development of the CD-RISC, incorporated scale items were added to include the concept of 'hardiness' (Kobasa, 1979). This referred to a personality characteristic associated with a person's control, commitment, and attitude as applied to those situations where change is viewed as a challenge. This feature would be appropriate when applied to practitioners who may demonstrate not only any ability to recover from personal and professional stress but display a commitment towards patients or may persevere while working with patients in relation to their resilience. Correlation analysis revealed an association of .83 between the CD-RISC and items drawn from the construct of hardiness for one of six participant groups comprising private practice psychiatric outpatients (Connor & Davidson, 2003). However, contrary to Connor and Davidson's (2003) significant finding, in a recent systematic review using thematic analysis, Pangallo and colleagues (2014) found no support for the theme of hardiness

indicated from scale items in the CD-RISC. It is possible that these contrasting findings could be related to the use of different research designs: Pangallo and colleagues sought to identify themes within the context of analysing scale items across 17 resilience measures whereas Connor and Davidson's study focused on testing the validity of the CD-RISC. Further research has identified convergence between CD-RISC scores and hardiness for Japanese (Ito, Nakajima, Shirai, & Kim, 2009) and Australian participants (Gucciardi & Gordon, 2009). In addition, factor analyses of the measure suggest that resilience can be viewed as a determinant of behaviour. Connor and Davidson's (2003) factor analysis of the CD-RISC using community participants (n = 577) revealed five factors, one of which comprised "personal competence, high standards, and tenacity".

The CD-RISC when used on a sample of health care professionals (i.e., operating room nurses) identified the same five factor structure (Gillespie, Chaboyer, and Wallis, 2009). Comparable factors associated with Connor and Davidson's (2003) original analysis have been identified transcending a diverse range of over 10,000 participants from 21 studies across nine countries (i.e., Iran, China, Canada, Japan, Australia, Spain, India, Turkey, and Korea), and comprising different population samples (e.g., university students and business owners).

In summary, there is empirical evidence, albeit limited on the contribution of resilience to effective psychotherapy practice (Green et al., 2014). In addition, research findings suggest how resilience functions: by firstly buffering the impact of personal and professional stressors that practitioners may experience, secondly promoting wellbeing necessary to enable practitioners to work effectively with patients, and thirdly enabling practitioner to be committed and persevere in their work with patients. The CD-RISC is an appropriate resilience measure as it has demonstrated sensitivity to expected systematic differences between more and less effective practitioners (Green et al., 2014). The measure has been widely applied across participants from different professions and different countries. It measures resilience as a day-to-day enduring personal aspect that takes into account practitioners' adaptive response to stress for their own wellbeing and pro-active response while working with patients.

3.3 **Empathy**

The concept of empathy was highlighted in the 1940s by Carl Rogers, who proposed its significance within the context of clinical practice. Put forward as a cornerstone of talking therapies, it has undergone much scrutiny within psychotherapy research. In addition, there are therapeutic approaches that focus primarily on practitioner empathy (i.e., client-centred therapy, psychoanalytic therapy; Elliott, Bohart, Watson, & Greenberg, 2011). Across the three practitioner personal aspects examined in this thesis, empathy is the most established within psychotherapy research and practice. Given that much of the research on empathy has extensively examined the concept within clinical practice, it is of direct relevance in the current study (Bohart, Elliott, Greenberg, & Watson, 2002). A notable difference, however, in terms of how the present study has framed empathy is that it is examined as a naturally-occurring daily phenomenon that practitioners have the potential to utilise in their practice, rather than one which is directly measurable within the context of providing psychological therapies. Following from this framing of empathy as a personal aspect that can be drawn on, empathy as measured in the current thesis also differs from therapeutic empathy as it does not take into account how empathy is experienced by others.

3.3.1 **Empathy and effective practice**

There is substantial empirical evidence suggesting that practitioner empathy, when applied within the therapeutic setting, significantly contributes to patient outcome (Elliott et al., 2011; Greenberg, Elliott, Watson, & Bohart, 2001). Elliott and colleagues (2011) conducted a meta-analysis of 57 studies carried out between 1961 and 2000 and comprising 224 empathy-outcome association tests applied to a total of 3,599 patients. Empathy measures comprised observer ratings of empathy, patient ratings of empathy, and practitioner ratings of empathy. Across the studies, patients presented with a range of mental health conditions (including affective and anxiety disorders). The analysis identified a study-level medium effect size ($r = .31$), indicating a 9% contribution that practitioner empathy made towards patient outcome. This finding was consistent with a prior review (Bohart et al., 2002). Overall, the research evidence gives credence to the significance of practitioner empathy,

particularly in the context that specific treatment approaches have been found to account for 1-8% of the variance in patient outcomes (Wampold, 2001).

3.3.2 **Empathy as facilitating more effective responses to patients.**

The significant contribution of empathy to patient outcome is important to the role practitioners play in understanding patients. Practitioners' understanding of the patient is essential for the primary reason that the patient is central; not a passive recipient of therapy but a significant contributor to their own outcomes. There has been a considerable range in the estimated proportion of patient outcomes to which they are considered to contribute: from 30% (Norcross & Lambert, 2011) and 40% (Asay & Lambert, 1999) considering the patient and his/her life factors, up to approximately 87% considering variability due to common factors after accounting for approximately 13% due to psychotherapy factors (Wampold, 2001). If a patient is demoralised or unwilling to participate in the therapeutic process, efforts from the practitioner to facilitate improved psychological functioning may result in little effect. By having a more accurate understanding of a patient, a practitioner is more likely to respond effectively in mobilizing patient motivation or adapting to patient characteristics which have been empirically found to contribute to their own improvement. These include patient motivation (Norcross, Krebs, & Prochaska, 2011), patient attachment style (Levy, Scott, & Bernecker, 2011; Obegi & Berant, 2008), and coping style (Beutler, Harwood, Alimohamed, & Malik, 2002; Beutler, Harwood, Kimpara, Verdirame, & Blau, 2011). For a review of patient characteristics, see Bohart and Wade (2013).

3.3.3 **Conceptualisation, operationalisation, and measurement**

Research focusing on the concept of empathy has been closely contextualised within the practitioner-patient interaction. Carl Rogers (1980) employed the following definition: "being empathic is to perceive the internal frame of reference of another with accuracy and with the emotional components and meanings which pertain thereto as if one were the person" (p.140). The personal aspect included behavioural correlates of:

> "entering the private perceptual world of another…..being sensitive, moment by moment….moving delicately without making judgments…..communicating your sensings of the person's world…checking with the person as to the accuracy of your sensings….and being guided by the responses you receive….you lay aside your own views and values in order to enter another's world without prejudice." (p. 142)

This definition suggests that empathy within practice is a feature inherent within the communication between a practitioner and a patient, where the practitioner arguably manoeuvres and uses discretion in applying or relying on empathy within a treatment session. Presumably practitioners possess a general capacity that may predispose them to better understand their patients' experiences in order to further be able to be empathic during treatment sessions (e.g., through the deliberate use of empathic reflections, empathic questions, or empathic conjectures; Elliott et al., 2011).

Consensus on the primary constructs of empathy has been elusive. Empathy has been quantitatively measured in respect to the experience of another's emotion – that is, affective empathy (e.g., Questionnaire Measure of Emotional Empathy; Mehrabian & Epstein, 1972 and Toronto Empathy Questionnaire: Spreng, McKinnon, Mar, & Levine, 2009), cognitive understanding of another's emotion – that is, cognitive empathy (e.g., Hogan Empathy Scale; Hogan, 1969), or a combination of both affective and cognitive empathy (e.g., Empathy Quotient, EQ; Baron-Cohen & Wheelwright, 2004 and the Interpersonal Reactivity Index, IRI; Davis, 1980, 1983).

The current research has examined empathy as a unitary construct using the Basic Empathy Scale for Adults (BES-A; Jolliffe & Farrington, 2006; Carré, D'Ambrosio, Bensalah & Besche, 2013). This measure was selected as it measured both cognitive and affective empathy domains. Despite being a relatively new measure, the BES-A was selected over other measures that assessed both empathy domains for several reasons. The BES-A contained the fewest number of scale items (19 items) compared to the EQ (60 items; Baron-Cohen & Wheelwright, 2004) and the IRI (28 items; Davis, 1980, 1983). In addition items of the BES-A displayed face validity as a measure of day-to-day empathy. Items related to common daily experiences (for example when watching TV or a film or while interacting with a friend) and pertained to 5 basic emotions (i.e., fear, sadness, anger and

happiness) which are likely to enable unambiguous interpretation when responding to questionnaire items. In contrast, IRI items included more ambiguous emotional descriptors e.g., "When I'm upset at someone, I usually try to "put myself in his shoes" for a while." (IRI item; Davis 1983) or events that did not relate to day-to-day experiences e.g., "When I was a child, I enjoyed cutting up worms to see what would happen." (EQ item; Baron-Cohen & Wheelwright, 2004).

The BES-A constitutes a back-translated version of the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) used to measure empathy in adolescents. The BES was designed to measure empathy as defined by "the understanding and sharing in another's emotional state and context" (Cohen & Strayer, 1996; p. 988). The authors' reported research that has demonstrated the relationship between empathy and prosocial behaviour and expressed an aim in developing a measure to overcome shortcomings of existing questionnaires in detecting empathy differences between offenders and non-offenders. Items of the BES were generated following the authors' concerns over the limitations of empathy measures. Items were designed according to five criteria: i) to be more precise in measuring empathy without any confounds with the concept of sympathy; ii) to assess more common experiences of empathy (rather than empathy experienced in emergency situations); iii) to measure empathy for four 'basic emotions' that would reduce ambiguity of appraisals; iv) to measure affective and cognitive empathy, and v) to more precisely measure cognitive empathy of another's emotion versus perspective taking that can be void of processing another's emotion. A questionnaire-form of assessment was chosen in contrast to other assessment techniques (e.g., pictures, facial or gesture responses, presentation of stories) given a more consistent yield on the relationship between empathy and behaviour based on prior research that used structured questionnaire measures. An initial total of 40 items was reduced to 20 following an exploratory factor analysis and a confirmatory factor analysis verified a two-factor model comprising affective and cognitive empathy when developed using a sample of adolescent participants. This age group was considered salient given deficits in empathy might be related to offending and furthermore crucial within the adolescent age group where offending was said to be at the highest prevalence and frequency. Participating adolescents were reported to come from diverse social and intellectual backgrounds with the aim that

the measure would be applicable to all young people. The BES revealed a two-factor model comprising affective and cognitive empathy.

Analysis conducted by Carré and colleagues (2013) to a French-speaking adult population comprising psychology or social science students, working and retired adults resulted in the removal of 1 item due to low factor loading and a finding of a three-factor model. These factors comprised cognitive empathy and two factors for the prior affective empathy: emotional contagion and emotional disconnection.

In summary, there is substantial and consistent research yield on the contribution of empathy within the context of psychotherapy sessions. This yield presumes that practitioners possess a capacity to be empathic. This capacity is one component that is examined in the current thesis. The BES-A (Carré, D'Ambrosio, Bensalah, & Besche, 2013; Jolliffe & Farrington, 2006), a recently constructed empathy scale, measures the phenomena of empathy as a day-to-day personal aspect. The measure is used to examine how practitioners' general capacity to understand a person's emotional experiences (as opposed to specific empathy-related skills) contributes to their delivery of better patient outcomes.

3.4 **Mindfulness**

Mindfulness, described as "a quality of consciousness", has been recognised across many age-old philosophical and spiritual traditions and more recently psychological traditions (Brown, Ryan, & Creswell, 2007b; Kabat-Zinn, 1982; Siegel, Germer, & Olendzki, 2009). Interest in mindfulness was sparked by its clinical application in the treatment of chronic pain (Mindfulness-Based Stress Reduction MBSR; Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985). This personal aspect has been studied primarily in the context of clinical practice resulting in different operationalisations and treatment approaches relevant to different patient groups (e.g., MBSR; Kabat-Zinn 1982; Dialectical Behavioral Therapy; Linehan, 1993). While research on the concept of mindfulness is in its infancy (relative to research of resilience and empathy), and in light of popular interest in mindfulness (Kabat-Zinn, 2014), there is a risk that clinical conceptualisations can confound its meaning. Researchers and Buddhist scholars caution that the meaning of mindfulness is not limited to

the methods by which it can be cultivated (Brown, Ryan, & Creswell, 2007b; Kabat-Zinn, 2003). The current study measures mindfulness as a naturally occurring human phenomenon that can be cultivated and is not exclusive to those who engage in structured mindfulness activities (e.g., meditation) or mindfulness as prescribed within clinical practice.

3.4.1 **Mindfulness and effective practice**

A study by Stanley et al. (2006) was conducted on 23 doctoral trainees in clinical psychology who provided manualised treatments to 144 outpatients. Patients presented with a range of diagnoses, with a higher prevalence of mood disorders and personality disorders. Most patients received CBT or variants of CBT. The study found an inverse relationship between practitioner mindfulness and patient outcome. That is, higher therapist mindfulness (as measured on the MAAS, the measure adopted in the current research) significantly predicted lesser patient improvement in patient symptomology indicated on the Clinical Global Impressions (Guy, 1976) and the Global Assessment of Functioning (DSM-IV; American Psychiatric Association, 1994). The authors argued that practitioners, when providing manualised treatments, might find that being mindful potentially interferes with the provision of skilled tasks that are controlled by procedural memory.

Another study involving the provision of an eclectic, integrative inpatient treatment programme provided by psychology trainees, generated contrary findings. Grepmair et al. (2007) conducted a randomised, double-blind, controlled study involving 18 psychology trainees who treated 124 inpatients. Inpatients presented with a range of diagnoses including adjustment disorders, mood disorders, and personality disorders. Nine trainees were randomly assigned to practice nine-weeks of Zen meditation, while the remaining nine trainees did not perform meditation as part of the control group. The inpatients received nine weeks of treatment which included using different modalities (i.e., individual and group sessions) and drawn from different approaches/interventions (e.g., gestalt, psychoanalysis, progressive muscle relaxation, sports groups). Those patients treated by the trainees who meditated showed a significant symptom reduction on the scales of the Symptom Checklist Revised-90 (SCL-90; Derogatis, 1983). Although statistically significant systematic group differences were identified between the meditation and non-meditation trainee groups, there is a

possibility that the findings mask confounds associated with the diversity inherent in the treatment program delivered. Alternatively, the finding suggests that more mindful trainees deliver more effective practice irrespective of the treatment intervention provided.

A more recent study by Ryan, Safran, Doran, and Moran (2012) studied 26 therapists (comprising trainee and licensed clinical psychologists and psychiatric residents) who were randomly assigned to provide either Brief Relational Therapy (BRT) or Cognitive-Behavioural Therapy (CBT). Each practitioner provided treatment for a patient sample that was characterised by a range of diagnoses (similar to the 2 abovementioned studies; Grepmair et al., 2007; Stanley et al., 2006), including a high prevalence of depressive disorder, personality disorders unspecified, followed by anxiety disorder. Among the measures administered were the Kentucky Inventory of Mindfulness Skills (Baer, Smith, & Allen, 2004) to assess practitioners' mindfulness as well as two measures of patient outcome: the Inventory of Interpersonal Problems-32 (Horowitz, Alden, Wiggins, & Pincus, 2000) and the SCL-90 (Symptom Checklist Revised-90; Derogatis, 1983). Although the study examined a small sample of practitioners and patients, practitioner mindfulness was associated with patients' improved interpersonal functioning ($r = -.48$) but not with patient improvement of symptoms. Ryan et al. (2012), who described their study as preliminary, highlighted the shortage of studies considering the contribution of practitioner mindfulness to psychotherapy and the need for further research.

3.4.2 **Mindfulness, wellbeing, and influence on professional practice**

Shapiro, Brown, and Biegel (2007) conducted a nonrandomized study on a cohort of masters-level counselling students. The study comprised three graduate courses offered to the students: a Stress and Stress Management course that modelled the manualised MBSR (Mindfulness-based stress reduction program; Kabat-Zinn, 1982), a Psychological Theory course and, a Research Methods course. The latter two courses comprised two control groups. Apart from the different contents taught for each course, the intervention group differed from the control groups as it included experiential exercises, in contrast to both control groups using a purely didactic teaching approach. All courses were structurally equivalent in regards to instructor attention and course duration and

group-based modality. Findings were based on 22 students in the intervention group with 32 students in the two control groups. Mindfulness was measured using the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). Among the findings, MBSR participants – in contrast to the participants in the combined control groups – showed statistically significant increases in levels of mindfulness. In addition, increased mindfulness significantly predicted improved wellbeing in respect to reduced rumination, trait anxiety, perceived stress, and increased levels of self-compassion.

Further studies on practitioners have similarly found that mindfulness training is associated with reduced stress, reduced symptoms of anxiety and depression (Cohen & Miller, 2009; Waelde et al., 2008), as well as increases in practitioner empathy (Aiken, 2006; Lesh, 1970; Wang, 2007). Related studies have been conducted with the participation of health care professionals and medical students who received MBSR treatment. Findings included reduced stress levels and increased self-compassion (Shapiro, Astin, Bishop, & Cordova, 2005), reduced burnout (Cohen-Katz et al., 2005), reduced anxiety and psychological distress (Shapiro, Schwartz, & Bonner, 1998).

The effect of mindfulness on wellbeing has been measured in the field of neuroscience. Davidson and colleagues (2003) conducted a first study that documented significant asymmetric changes in activation of frontal regions of the brain associated with dispositional affect. Participants who completed an 8-week MBSR training program showed significant increases in the activation of the left-side anterior, which was found to be associated with positive affect relative to participants in the control group. More broadly, a review of research within the field of neuroscience found preliminary evidence that mindfulness meditation improves cognitive ability including attention and monitoring abilities and working memory (Chiesa, Calati, & Serretti, 2011). Authors emphasise the need for more research in light of methodological limitations of current studies and the presence of negative findings possibly associated with methodological limitations. In addition to these findings, mindfulness has been described as a precursor for resilience. It facilitates faster recovery of neural activation associated with stress and anxiety in the amygdala or better emotion regulation, thereby enabling a person to respond with resilience (Davidson, 2000; Davidson, 2013).

Besides, its association with wellbeing, which is significantly related with patient outcome (as described above in Section 3.2.2; Beutler et al., 2004), research findings also suggest how mindfulness may uniquely contribute to effective practice. Research has indicated that mindfulness reduces individuals' reactivity (Cahn & Polich, 2009; Siegel, 2007) and increases individuals' cognitive flexibility (Moore & Malinowski, 2009; Siegal, 2007), features which would facilitate more effective responding by practitioners while working with patients. When engaging in mindfulness meditation a person notices the contents of their mind. Evidence on people who engage in mindfulness meditation indicate that this act of noticing enables disengagement of automatic neural pathways and enables the integration of the present moment in new ways (Siegel, 2007).

In relation to practitioners, this translates into a cumulative effect where practitioners have greater psychological freedom in choosing how to respond, rather than feeling compelled to act in a particular manner (e.g., consistent with personal biases and interests). Beginning with an ability to be aware of personal appraisals, interpretations or reactions in relation to patients and recognising these as functions of their thoughts, practitioners are able to intentionally revert to being present-moment focused while with patients. By remaining focused on the present, practitioners are able to maintain an empirical stance towards reality whereby accurate information is gathered (Brown, Ryan, & Creswell, 2007a), thereby enabling practitioners to respond more deliberately and effectively to patients.

3.4.3 **Conceptualisation, operationalisation, and measurement**

In relation to the delivery of psychotherapy, mindfulness has been defined as "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view" (Martin, 1997; p.291). Contrasting variations in the conceptualisation and operationalization of mindfulness remain. For example, Bishop et al. (2004) proposed that mindfulness involves meta-cognitive skills and that mindfulness has to be evoked by meditation or mindfulness training. Alternatively, Brown and Ryan (2004) argued that while mindfulness involves observing thought, it cannot constitute thought. Brown and Ryan cite Shear and Jevning's (1999) description of mindfulness as offering a "bare display of what is taking place" (p. 204). Mindfulness

is further described an inherent human capacity that can be further cultivated as demonstrated by measurement using the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003).

Mindfulness measures include measures applicable to clinical samples (for example, Kentucky Inventory of Mindfulness Skills; Baer, Smith & Allen, 2004 and Southampton Mindfulness Questionnaire; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005), and to people with experience in meditating (for example, Freiburg Mindfulness Inventory; Buchheld, Grossman, & Walach, 2001). Other measures specifically study mindfulness as a state (for example Toronto Mindfulness Scale; Lau et al., 2006), and mindfulness in general daily living (for example, Five-Facet Mindfulness Questionnaire; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006 and Cognitive and Affective Mindfulness Scale; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007 and the MAAS; Brown & Ryan, 2003)

The current research utilises the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003) to measure day-to-day mindfulness of practitioners. The MAAS has been extensively validated against numerous measures including personality features (e.g., NEO-PI Openness to Experience scale and the NEO-FFI Openness to Experience scale; Costa & McCrae, 1992), cognitive processing tendencies (e.g., Self-Consciousness Scale; Fenigstein, Scheier, & Buss, 1975 and Marlowe-Crowne Social Desirability scale; Crowne & Marlowe, 1960) and measures of wellbeing (Profile of Mood States; McNair, Lorr, & Dropplemann, 1971 and Positive and Negative Affect Schedule; Watson, Clark, & Tellegen, 1988). The MAAS is a frequently cited mindfulness measure (Grossman, 2011) and has yielded findings when applied to practitioner samples (e.g., Stanley et al., 2006) and sensitivity to showing significant increases in mindfulness amongst trainee practitioners who received mindfulness training (Shapiro et al., 2007).

The MAAS was designed in the context of limited research examining mindfulness as a naturally occurring personal aspect. This measure follows from the authors' definition of mindfulness as "an open or receptive attention to and awareness of ongoing events and experience" (Brown & Ryan, 2004; p. 245). Attention is defined as the "focusing of awareness to highlight selected personal aspects of (that) reality" (Brown & Ryan, 2004; p. 243). It does not relate to the restriction of

attention, but rather maintaining an observational stance against a constantly changing field of events and experiences (Kabat-Zinn, 1982). Awareness is described as "the subjective experience of internal and external phenomena; it is pure apperception and perception of the field of event that encompass our reality at any given moment." (Brown & Ryan, 2004; p. 242). This processing entails non-conceptual and non-discriminatory observing.

The MAAS has been criticized for i) measuring mindfulness as a simplified construct with using common day-to-day experiences (an example of an item of the MAAS is: "I forget a person's name almost as soon as I've been told it for the first time"), and ii) measuring mindfulness in laypersons who do not have extensive training in mindfulness and relatedly for considering mindfulness as naturally-occurring phenomena (Grossman, 2011). Brown, Ryan, Loverich, Biegel, and West (2011) responded to these criticisms, drawing attention that the validity of the measure has been adequately demonstrated and that the MAAS is authentic in its measure of mindfulness related to scholarly literature in Theravada Buddhism (Brown & Goodman, 2011). Additionally the authors noted that Buddhism has given form and not invented this human capacity. The MAAS has been found to identify mindfulness in non-expert and non-trained persons (Brown & Ryan, 2003) and to be sensitive in reflecting increases in mindfulness following MBSR training (Shapiro et al., 2007).

In summary, there is limited but substantive empirical evidence on the contribution of mindfulness to patient outcomes (Grepmair et al., 2007; Ryan et al., 2012; Stanley et al., 2006) despite shortcomings of studies associated with diverse patient diagnoses, treatment approaches and limited practitioner sample sizes, which also suggest the influence of mindfulness regardless of the treatment approach delivered. Mindfulness has been found to contribute to practitioner wellbeing and uniquely enables a state of consciousness of greater psychological freedom and responsive learning. The MAAS measures mindfulness as inclusive and accessible, assessing practical day-to-day experiences of the personal aspect.

3.5 **Resilience and Mindfulness**

Following from the above descriptions, it is evident that resilience and mindfulness share both intra and inter personal features. More specifically, each of these two personal aspects has been found

to contribute to individuals' personal wellbeing. In contrast, empathy is primarily interpersonal with limited intrapersonal applications. Research suggests resilience and mindfulness to be positively associated, although the nature of the relationship is unclear. For example, mindfulness has been found to be a key attribute or predictor of resilience (Davidson, 2013), while further evidence has found mindfulness training to be associated with improvements in resilience in response to workplace stressors. For example, within the education field, Sharp and Jennings (2016) found that Kindergarten teachers who completed a mindfulness-based intervention reported being less emotionally reactive and more compassionate towards students. In addition, Christopher et al. (2015) reported that police officers who completed a mindfulness-based resilience training showed significant improvement in a range of personal qualities including mindfulness and resilience. Comparing a relationship where an increase in mindfulness increased resilience, resilience has been found to mediate the impact of mindfulness on well-being (Bajaj & Pande, 2016).

In light of the lack of a primary model proposing the specific relationship between resilience and mindfulness, the current research adopted an exploratory approach by employing a simple additive relationship between the two personal aspects. In addition, the study was contextualised within everyday routine practice of the delivery of effective practice of psychological therapies. Resilience and mindfulness, by their intra and interpersonal nature, enable interpretation of resilience and mindfulness scores in the context of practitioners' responsiveness to patients and also in the context of their personal wellbeing. The interpretations derived from the data are based on the operational definitions of the respective measures of personal qualities as applied to practitioners in their delivery of more effective practice.

3.6 **Method**

3.6.1 **Design**

Study I is a non-randomised cross-sectional observational study involving quantitative analyses of responses to structured questionnaires of the three personal aspects: resilience, empathy, and mindfulness. Measures were completed by three groups of IAPT practitioners: psychological wellbeing practitioners (PWPs), cognitive behavioural therapists, and counsellors. Research

conducted across this thesis received ethical approval from the UK NHS Health Research Authority and the local governing trust (reference number: 13/EM/0387). See Appendix IV.

3.6.2 **Recruitment of participants**

One hundred and sixteen potential participants employed within an Improving Access to Psychological Therapies (IAPT) service in England were approached to take part in this study. The IAPT service provided approximate numbers of practitioners within each service role. These comprised 50 PWPs, 32 counsellors, and 33 CBT therapists. Practitioners were informed of the study via newsletters, presentations, and forum discussions. The principal investigator (MB) first introduced the study to practitioners at an IAPT service annual away day approximately a year prior to data collection. Practitioners received a first electronic newsletter about the study nine months prior to data collection. The chief investigator (J-AP) presented the study design and procedures at three discipline-specific forums for each practitioner group, at a subsequent IAPT service annual away day, and at three practitioner team meetings each covering a different geographical region. Practitioners received a second newsletter detailing the design and procedures during the month prior to the start of data collection. To view the two newsletters, see Appendix V.

Research packs were distributed to practitioners via the service internal mail system, external post, and by hand. These contained a survey questionnaire booklet comprising five questionnaires that included three structured questionnaires on the respective personal aspects, information sheets and a freepost envelope. Throughout the study, electronic mail was used to contact all potential participants. Practitioners were sent a total of six electronic mails: one which distributed the above-mentioned newsletter, an email informing of the start of data collection, one addressing the distribution of research packs and three reminder emails. The data collection phase of the study spanned five months. Practitioners were encouraged to participate and were informed that they would be provided with aggregate level feedback on findings of the study.

3.6.3 **Participants**

Of the N=116 practitioners approached n=42 (36.2%) volunteered to take part in the study. Across the different practitioner roles, the approximate response rates were: PWPs n = 11/50 (22.0%); CBT therapists, n = 12/33 (36.4%), and n = 19/32 counsellors (59.4%). Table 3.1 presents a summary of demographic information for practitioner respondents.

Table 3.1:Practitioner demographics (n = 42)

	n	%	M	SD
Age			47.3	12.2
Sex				
- Male	10	23.8		
- Female	32	76.2		
Ethnicity				
- White	39	92.9		
- Black	2	4.8		
- Other	1	2.4		
Practitioner Qualification				
- Graduate	2	4.8		
- Post Graduate	33	78.6		
- PhD	1	2.4		
Current working hours (per week)			29.2	8.7
Practitioner work-related experience (FTE bands)				
- 0 – 10 years	25	59.5		
- 10 – 20 years	8	19.0		
- Over 20 years	8	19.0		
History of number of work-related roles			3.9	2.2
Reasons for preferred personal treatment approach				
- Treatment strengths	17	40.5		
- Treatment-self match	7	16.7		
- Treatment-illness match	8	19.0		
- Unfamiliar treatment	3	7.1		
- Provided by a practitioner who values the approach	2	4.8		
- Whatever approach that is available	1	2.4		
Professional Discipline				
- Psychological Wellbeing	11	26.2		
- CBT	12	28.6		
- Counselling	19	45.2		

Practitioners' ages ranged from 26 - 72 years with a mean of 47.3 years (SD = 12.2). There was a greater proportion of female practitioners (76.2%) compared to male practitioners (23.8%). Practitioners provided varying degrees of detail in response to open-ended demographic questions (e.g., questions requesting information on content, duration and hours per week of relevant general

life and work-related experiences). Thirty-one practitioners provided information on their current working hours ranging from 7.5 hours to 39 hours per week with a mean of 30.2 hours (SD = 7.9). Where possible, values were calculated to derive full-time equivalent (FTE) hours and categorised into 10-year bands of full-time equivalent experience. Practitioner experience ranged from 0 years (trainee) to over 30 years with most practitioners (n = 25; 59.5%) indicating 0 - 10 years of FTE work-related experience. Work-related experience comprised a wide range of voluntary and therapeutic roles (e.g., volunteer work with substance misuse patients, GP practice counselling, and employment as a mental health worker). Practitioners' number of previous work-related roles ranged from 1 to 9, with a mean of 3.9 (SD = 2.2) roles. Practitioners (n = 37) provided responses regarding their preference of therapy if seeking personal treatment and reasons for their selection. Practitioners' reasons included consideration of treatment strengths (n = 17, 40.5%), receiving a treatment that matched them personally (n = 7, 16.7%), and receiving a treatment that matched a specific problem they may face (n = 8, 19.0%).

All practitioners reported providing treatment consistent to their roles as PWPs (n = 11, 26.2%), CBT therapists (n = 12, 28.6%) and counsellors (n = 19, 45.2%). Practitioners reported however that they personally identified with specific approaches within their respective roles: PWPs responses included CBT, problem solving, relaxation and/or cognitive restructuring; CBT practitioner responses included CBT, ACT, behavioural activation, and/or mindfulness; counsellor responses included counselling for depression, person-centred therapy, emotion-focused therapy, psychodynamic therapy, and integrative approaches.

Table 3.2 provides information on key demographics for practitioners across the three professional roles. Notable differences include practitioners' mean ages and spread of males and females within each professional role. A one-way independent ANOVA examining age differences between the three practitioner groups, yielded a significant finding, $F(2, 35) = 26.14$, $p < .001$. Practitioners significantly differed in age comparing across PWPs, CBT therapists and counsellors. Three post hoc t-test comparisons were conducted. Statistically significant differences were found

between PWPs and counsellors, t (25) = -8.09, p < .001; CBT therapists and counsellors, t (27) = -3.95, p = .001; and PWPs and CBT therapists, t (18) = -2.62, p = .02.

Table 3.2: Practitioner spread of personal demographic characteristics between professional roles

	PWPs (n = 11)		CBT therapists (n = 12)		Counsellors (n = 19)	
	M	SD	M	SD	M	SD
Age	33.44	7.1	43.91	10.1	56.33	6.9
	n	%	n	%	n	%
Sex						
- Male	2	18.2	5	41.7	3	15.8
- Female	9	81.8	7	58.3	16	84.2
Ethnicity						
- White	10	90.9	12	100	17	89.5
- Black	0	-	0	-	2	10.5
- Other	1	9.1	0	-	0	-

In respect to practitioner gender, consistent with proportions of male and female practitioners in Table 3.1, there is a larger proportion of female practitioners in all practitioner groups (Table 3.2) although less distinct proportions amongst CBT practitioners. No significant differences were identified in respect to the spread of males and females within the professional roles (p = .27, Fisher's exact test). Statistical analysis of differences in practitioner ethnicity was not possible due to the lack of spread of practitioners across the different ethnic groups.

3.6.4 **Measures**

Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003)

The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) is a 25-item self-report 5-point Likert-type scale measure. Items are described as measuring characteristics consisting of: (a) personal competence, high standards, and tenacity (item e.g., "I give my best effort no matter what the outcome may be."); (b) trust in one's instincts, tolerance of negative affect, and strengthening effects of stress (item e.g., "Under pressure, I stay focused and think clearly."); (c) positive acceptance of change, and secure relationships (item e.g., "I can deal with whatever comes my way."); (d) control (item e.g., "I have a strong sense of purpose in my life."); and (e) spiritual influences (item e.g., "Good or bad, I believe that most things happen for a reason."). Individual items score on a range from 0 ("not true at all") to 4 ("true nearly all the time") with total CD-RISC scores

ranging from 0 to 100. Final scores are expressed as a sum total of all scores. The CD-RISC has an internal consistency of .89 for the full scale and correlations between items ranged from .3 to .7 and the test-retest reliability (intraclass correlation coefficient) has been reported as .87 (Connor & Davidson, 2003).

The items comprising the CD-RISC are designed to incorporate 17 characteristics of resilient people (Connor & Davidson, 2003, p 77). These 17 characteristics were identified from i) research on hardiness – that is, characteristics of control, commitment, and perspective of change viewed as a challenge (Kobasa, 1979); ii) Rutter (1985) on protective factors related to psychiatric disorders giving significance to characteristics which included adaptive responses (e.g., engaging support from others, having goals, being action oriented, utilising humour), drawing strength from stress and past success; iii) Lyons (1991) suggestions on assessing potential for resilience in relation to trauma (i.e., characteristics of patience and perseverance through stress), and iv) personal experiences of resilience by Shackleton (a British explorer) who highlighted characteristics of optimism and faith. Factor analyses were conducted on 5 samples comprising community members, primary care outpatients, private practice psychiatric outpatients, participants with generalised anxiety disorder and participants of PTSD clinical trials (Connor & Davidson, 2003).

The CD-RISC was first assessed against empirical measures including i) items measuring hardiness drawn from Kobasa (1979), ii) perceived stress using the Perceived Stress Scale (PSS-10; Cohen, Kamarck, & Mermelstein, 1983), iii) stress vulnerability using the Stress Vulnerability Scale (SVS; Connor, Vaishnavi, Davidson, Sheehan, & Sheehan, 2007), and iv) social support using the Sheehan Social Support Scale (SSSS). The resilience scale was found to converge with scores on hardiness and diverge with scores on perceived stress and stress-vulnerability. Subsequent studies have similarly identified positive relationships between resilience and hardiness (Gucciardi, Jackson, Coulter, & Mallett, 2011; Ito et al., 2009;), resilience and self-esteem (Baek, Lee, Joo, Lee, & Choi, 2010; Benetti & Kambouropolous, 2006; Karairmak, 2010; Yu & Zhang, 2007), and resilience with a range of characteristics including life satisfaction, extraversion, conscientiousness, emotional

intelligence, optimism, and subjective wellbeing (Campbell-Sills, Cohan, & Stein, 2006; Karairmak, 2010; Torgalsboen, 2012; Yu & Zhang, 2007).

The CD-RISC has been administered to various community samples including a general non-help seeking sample. While exploratory factor analyses have revealed multiple factors (up to five) when examined using different participant samples, the authors of the measure recommend resilience is measured as a unitary construct.

Basic Empathy Scale for Adults (BES-A; Carré, D'Ambrosio, Bensalah, & Besche, 2013; Jolliffe & Farrington, 2006)

The Basic Empathy Scale for Adults (BES-A) is a 19-item self-report 5-point Likert-type scale measure of empathy. It is a back-translated version of the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) originally used to measure empathy in adolescents. Items contained in the original BES were designed to measure daily experiences of empathy related to basic emotions of happiness, sadness, anger, and fear (e.g., "I can usually work out when my friends are scared" or "I can usually realise quickly when a friend is angry"). The measure was not designed to examine empathy as experienced by others.

In the current study, consistent with the recommended scoring by the measure developers, items 1, 6, 7, 8, 13, 18, 19 and 20 were reverse scored on the designed Likert scale. Practitioner empathy was, however, examined as a unitary construct (sum of all 19 BES-A scale items) in the current thesis in order to retain the statistical power of the analyses across the multiple practitioner personal aspects examined. Individual items scores range from 1 ("strongly disagree") to 5 ("strongly agree") with total BES-A scores ranging from 19 to 95 with the final scores expressed as a sum total of all item scores. (For further elaboration on BES-A factors, see Appendix VI).

The measure originally displayed a 2-factor model on the BES comprising adolescent respondents' affective and cognitive empathy (Jolliffe & Farrington, 2006). Carré and colleagues (2013) studied the BES when applied to a French-speaking adult population and identified a 3-factor model with 1 item being removed due to weak factor loading. These factors extended from the

previously established 2-factor affective and cognitive empathy model to include cognitive empathy and divide affective empathy into two factors taking into account a person's bottom-up and top-down processing of affective empathy. These comprised 'emotional contagion' (i.e., a person's affective replication of another's emotions) and 'emotional disconnection' (i.e., a person's self-regulation in response against another's emotions). The 3-factor model of the BES-A revealed internal consistency alpha values of .69 for cognitive empathy, .72 for emotional contagion, and .82 for emotional connection. Test-retest reliability coefficients (for a 7-week interval) for the 3-factor model have been reported to show correlation coefficients of .56 for cognitive empathy, .74 for emotional contagion, and .70 for emotional connection.

Carré and colleagues (2013) found that cognitive empathy converged with the cognitive dimensions of empathy on the Interpersonal Reactivity Index subscales of empathic fantasy and perspective taking (IRI; Davis, 1980, 1983) and an affective IRI dimension (i.e. subscale of empathic concern). Cognitive empathy was also convergent with emotional experiences in social contexts and divergent with alexithymia, more specifically with difficulties in identifying emotions. Emotional contagion converged with empathic fantasy, empathic concern, personal distress, emotional expression and difficulties in identifying feelings. Emotional contagion scores were found to diverge with emotional recognition. In relation to emotional disconnection, this factor diverged with all IRI subscales and with people's capacity for emotional expression and converged with difficulties in describing feelings.

Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003)

The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) is a 15-item self-report 6-point Likert-type scale measure of mindfulness. The measure is named "Day-to-day experiences" and has an internal consistency ranging from .80 to .90 and a 4-week test-retest reliability of .81. MAAS items assess day-to-day observable experiences of impaired consciousness, for example: "I find myself listening to someone with one ear, doing something else at the same time" or "I find myself doing things without paying attention". While items are worded to assess the lack of mindfulness, they were reverse scaled (i.e. from lowest scores of 1 for "Almost always" to a higher

score of 6 for "Almost never"), providing higher scores as a measure of higher levels of mindfulness. With individual items scores ranging from 1 to 6, the total MAAS scores range from 15 to 90 with the final score expressed as an average value of the 15 items. For the current study, MAAS scores are expressed as total scores rather than average score to enable more ease of readability given the context of analysing 3 key measures on practitioner characteristics. Note that all three measures are scale dependent and as such unstandardized scores cannot be compared directly between the different measures.

The MAAS measures mindfulness as a trait and contains items designed to measure "an open or receptive attention to and awareness of ongoing events and experience" (Brown & Ryan, 2004; p. 245). The measure emerged following several stages. Scale items were initially derived from a scope of personal experience, knowledge, published writings on mindfulness and attention, as well as existing scales which assess conscious states. Items were reduced to exclude attitudinal and motivational components, products (versus the process) of mindfulness, and items which implied refined levels of consciousness. Factor analyses were conducted on samples of undergraduate students, community members, adults and adult cancer patients confirming a single factor structure for the scale (Brown & Ryan, 2003; Carlson & Brown, 2005).

The MAAS has been assessed for convergent and discriminant validity against many empirical measures. For example, it has been evaluated against measures assessing personality features: i) personality and openness to experience using the NEO-PI Openness to Experience scale and the NEO-FFI Openness to Experience scale (Costa & McCrae, 1992), and ii) the Minnesota Multiphasic Personality Inventory - Lie Scale (Hathaway & McKinley, 1989). Other measures have included the assessment of people's tendencies to engage in specific processing comprising: i) tendencies to reflect on oneself from a personal and from a social perspective using the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975), ii) the tendency to ruminative or reflect using the Rumination-Reflection Questionnaire (Trapnell & Campbell, 1999), iii) self-monitoring involved in observing and controlling expressive behaviour using the Self-Monitoring Scale-Revised (Snyder & Gangestad, 1986), iv) enjoyment in cognitive endeavours using the Need for Cognition

scale (Cacioppo, Petty, & Kao, 1984), v) disposition to enter transient altered states of consciousness using the Absorption scale (Tellegen, 1982), and vi) social desirability using the Marlowe-Crowne Social Desirability scale (Crowne & Marlowe, 1960). The validity of MAAS has also been tested against emotional intelligence using the Trait Meta-Mood Scale (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) and the Mindfulness / Mindlessness Scale (Bodner & Langer, 2001).

The MAAS has also been assessed against wellbeing measures assessing: i) traits and attributes of dispositions including anxiety, depression and impulsiveness using the NEO-PI and NEO-FFI, ii) emotional disturbance using multiple scales including the Beck Depression Inventory (Beckham & Leber, 1985), and iii) the Profile of Mood States - anxiety subscale (McNair, Lorr, & Dropplemann, 1971). Further wellbeing measures examined iv) positive and negative affect using the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), iv) eudaimonic wellbeing using measures including Personal Well-Being Scales (Ryff, 1989), and v) physical wellbeing using measures including Hopkins Symptom Checklist Somatization scale (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974).

Analyses arising from the above studies revealed patterns of convergence and divergence across measures and their subscales consistent with expectations (Brown & Ryan, 2003). This included convergence with traits on clarity and attention, mindfulness, internal state awareness, reflection, emotional-subjective, eudaimonic wellbeing that is associated with features of self-actualisation and physical well-being. The MAAS diverged with self-reflectiveness, public self-consciousness, social anxiety, rumination and emotional disturbance. Findings suggest that the MAAS taps into a unique quality of consciousness and is related to emotional and behavioural regulation and characteristics of wellbeing.

3.6.5 **Procedure**

All measures were included in a practitioner survey questionnaire booklet and ordered according to the length of each questionnaire (i.e., beginning with the questionnaire with the fewest to the most items). The first questionnaire was the demographic questionnaire. Practitioners provided information regarding their sex, ethnicity, age, qualification/accreditation, related life and work

experience, as well as their personal identification to treatment models and preferred treatment if they are to receive treatment themselves. For the demographic questionnaire see Appendix VII. The demographic questionnaire was followed by the measures of mindfulness, empathy and resilience. Practitioners were encouraged to complete the questionnaire booklets in the order in which it was designed at their own convenience of preferred time and place.

A feature of the study design comprised control of experimenter bias. All practitioner questionnaire responses were anonymised. Procedurally, all participant questionnaires were received by a delegated data custodian who removed a detachable practitioner-completed consent form. The responses were then re-randomised, with allocation of random arbitrary identity numbers prior to being passed to the chief investigator.

3.6.6 **Data analysis**

The majority of practitioners provided responses to all questionnaire items. Missing data to structured questions comprised four responses relating to practitioner age (9.8%) and seven responses relating to practitioner qualification (16.7%). On three occasions practitioners provided two responses to personal aspect questionnaire items. The decision was made to select the relatively more conservative response (i.e., the lower score of two consecutive responses provided for these respective items). All practitioner responses were retained in the data.

Practitioners' personal aspect responses were analysed through a series of stages. Firstly, distributions of scores on each personal aspect were examined. Secondly, analysis was conducted on responses provided across items for all three personal aspect questionnaires. Thirdly, tests were conducted on whether practitioners' responses could be accounted for by their age or sex. Fourthly, correlational analyses were conducted to identify significant relationships between the personal aspects. Finally, ANOVA and t-tests were conducted to examine significant differences between the personal aspects scores.

Analyses conducted within the latter two stages sort to examine all possible conceptual combinations by which the practitioners could be grouped. These comprised groupings according to

(i) the treatments provided (i.e., PWP, CBT, and counselling treatments), ii) the intensity of treatment provided (i.e., low intensity PWP treatment and high intensity treatment provided by both CBT therapists and counsellors), and iii) the different theoretical-orientations of treatment provided (i.e., counselling and CBT-oriented approaches provided by both PWPs and CBT therapists). For correlational analysis, where significant correlations were identified, 95% confidence intervals were provided to display the precision of estimated coefficients. Data were analysed using the IBM SPSS Statistics 21 software program. Confidence intervals were derived using a web-based calculator of confidence intervals for correlations – how2stats ("how2stats," 2015).

3.7 **Results**

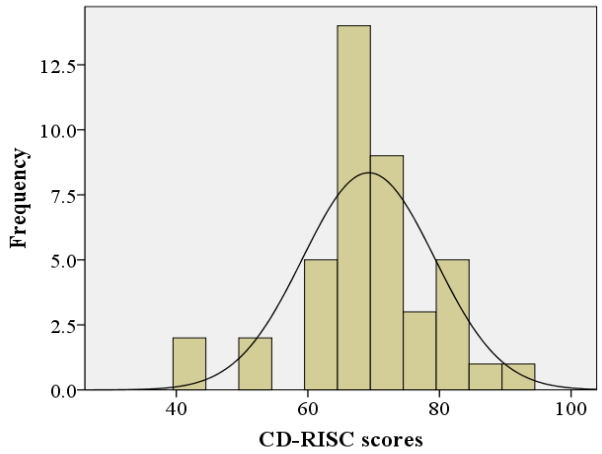
3.7.1 **Personal aspect distributions**

Responses on each personal aspect were normally distributed based on visual examination of histograms and distributions' skewness statistic: resilience skewness coefficient = -0.47 (SE = 0.37); empathy skewness coefficient = -0.24 (SE = 0.37); and mindfulness skewness coefficient = -0.59 (SE = 0.37). Resilience scores showed significant positive kurtosis; kurtosis coefficient = 1.74 (SE = 0.72), compared to kurtosis coefficients of empathy scores 0.09 (SE = 0.72) and mindfulness scores 0.60 (0.72). The histograms of practitioner personal aspect scores are presented in Figures 3.1a, 3.1b and 3.1c. Figure 3.1a reflects the positive kurtosis with the notable pointed distribution with a high frequency of 14 practitioners with CD-RISC scores of 65-70 relative to the frequency of other CD-RISC scores. For a complete presentation of histograms on all personal aspects including empathy factors, see Appendix VIII.

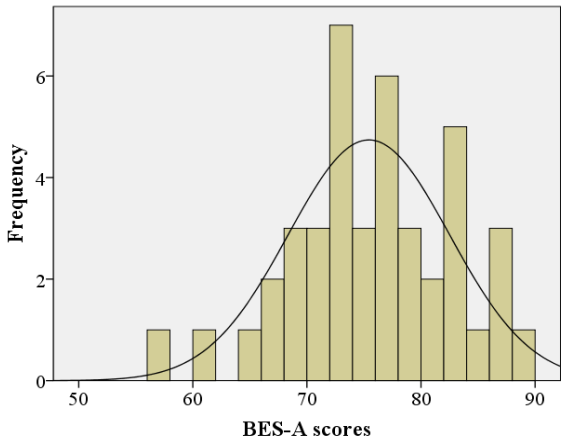
The reliability of the CD-RISC, BES-A, and MAAS was assessed using responses provided by the current (n = 42) practitioner sample. The Cronbach alpha for the sample was .87 for the CD-RISC, .83 for BES-A, and .88 for the MAAS. Accordingly, responses from the current sample of practitioners across the three measures indicated good internal reliability with alpha scores ≥ .70.

Figure 3.1: Histograms of practitioner scores on a) resilience, b) empathy, and c) mindfulness (n = 42)

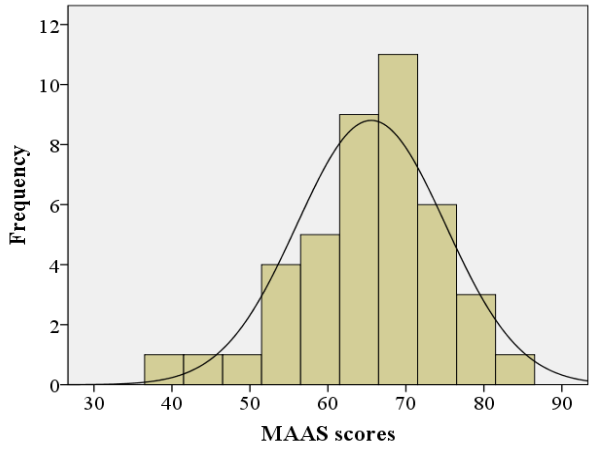
3.1a Resilience



3.1b Empathy



3.1c Mindfulness



3.7.2 **Practitioners' responses across items for each personal aspect measure**

Tables 3.3, 3.4, and 3.5 present information on practitioners' responses on items for each of the three personal aspect measures. For each item, mean and SD values of practitioners' responses are provided, together with practitioners' minimum and maximum scores. The "% high" reflects the proportions of responses by practitioners for the highest two possible scale responses for each item provided, and "Item-Total" reflects the correlation values of each item in relation to the composite of standardised scores of all items across the three measures. Items in each table have been ordered from items with the highest to the lowest "% high". This order would indicate items where the largest percentage of practitioners rated themselves highly to items where the fewest percentage of practitioners rated themselves highly.

Resilience

Across the CD-RISC items displayed in Table 3.3, all practitioners endorsed having at least one close and secure relationship that helped them when they are stressed (see item 1 in Table 3.3). Practitioners selected Likert scale items 3 ("often true") and 4 ("true nearly all the time") only. At a factor level, the first 5 listed items comprise three Factor 1 items, one Factor 3 items and one Factor 4 item. This suggests that most practitioners endorsed relatively higher levels of resilience associated with personal competence, high standards and tenacity. In contrast the last 5 items (items 21-25) comprise one Factor 1 item, two Factor 2 items and 2 Factor 5 items. These suggest that practitioners did not endorse having higher resilience related to trusting their instincts, tolerating negative affect and drawing strength from stress. Notably few practitioners provided higher ratings of resilience related to faith or spiritual influences (items 23 and 25).

Table 3.3: Descriptive statistics for items of the CD-RISC:

	Items	Factor	Mean	SD	Min	Max	% "high"	Item-Total
1.	I have at least one close and secure relationship that helps me when I am stressed.	3	3.81	0.40	3	4	100.0	.48**
2.	I give my best effort no matter what the outcome may be.	1	3.10	0.76	0	4	88.1	.26
3.	I take pride in my achievements.	1	3.24	0.79	1	4	83.4	.50**
4.	During times of stress/crisis, I know where to turn for help.	4	3.24	0.79	1	4	83.4	.47**
5.	Even when things look hopeless, I don't give up.	1	3.07	0.64	2	4	83.3	.45**
6.	Past successes give me confidence in dealing with new challenges and difficulties.	3	3.17	0.76	1	4	83.3	.45**
7.	I believe I can achieve my goals, even if there are obstacles.	1	3.00	0.73	1	4	78.6	.55**
8.	I can deal with whatever comes my way.	3	3.00	0.66	2	4	78.5	.32*
9.	I think of myself as a strong person when dealing with life's challenges and difficulties.	1	2.86	0.65	1	4	76.2	.41**
10.	I am able to adapt when changes occur.	3	2.95	0.70	2	4	73.8	.24
11.	I tend to bounce back after illness, injury, or other hardships.	3	2.98	0.78	1	4	73.8	.47**
12.	I have a strong sense of purpose in life.	4	2.93	0.97	0	4	73.8	.50**
13.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	2	2.88	0.67	2	4	71.5	.38*
14.	I feel in control of my life.	4	2.88	0.92	0	4	69.1	.29
15.	I like challenges.	1	2.86	0.72	2	4	66.6	.55**

16.	I work to attain my goals no matter what roadblocks I encounter along the way.	1	2.74	0.77	1	4	64.3	.32*
17.	Having to cope with stress can make me stronger	2	2.64	0.73	1	4	59.5	.28
18.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	2	2.55	0.74	1	4	54.7	.56**
19.	I try to see the humorous side of things when I am faced with problems.	2	2.62	0.94	1	4	54.7	.26
20.	Under pressure, I stay focused and think clearly.	2	2.50	0.67	1	4	50.0	.33*
21.	I am not easily discouraged by failure.	1	2.48	0.74	1	4	47.6	.37*
22.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	2	2.14	0.90	1	4	33.3	.41**
23.	Good or bad, I believe that most things happen for a reason.	5	1.79	1.39	0	4	31.0	.02
24.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	2	2.14	0.87	1	4	30.9	.46**
25.	When there are no clear solutions to my problems, sometimes fate or God can help.	5	1.69	1.33	0	4	23.8	.14

**. Correlation is significant at the .01 level (2-tailed)
*. Correlation is significant at the .05 level (2-tailed)
All scores based on n = 42 sample of practitioners. CD-RISC (5-point scale): 0 = not true at all, 1 = rarely true, 2 = sometimes true, 3 = often true, and 4 = true nearly all the time; Factor 1 = Personal competence, high standards and tenacity; Factor 2 = Trust in one's instincts, tolerance of negative affect and strengthening effects of stress; Factor 3 = Positive acceptance of change and secure relationships; Factor 4 = Control; Factor 5 = Spiritual influences; %"high" = the highest 2 possible scale responses; Item-Total = correlation with composite score across items of all measures.

Empathy

Respondents' concordance across BES-A items showed a different pattern to that observed in respondents' resilience ratings. There was a greater prevalence of concordance between practitioners' responses for higher self-ratings relatively to that of the CD-RISC. Three items in the BES-A scale showed 100% concordance between practitioners' responses. All practitioners "agreed" and "strongly agreed" with the following statements: "I can understand my friend's happiness when she/he does well at something" (item 1, Table 3.4), "Other people's feelings don't bother me at all" (item 2, Table 3.4) and "I have trouble figuring out when my friends are happy" (reverse scored item 3, Table 3.4). Looking at the factors of empathy across items in Table 3.4, there appears to be a greater prevalence of Factor 2 items that practitioners rate themselves highly on, i.e., cognitive empathy. This is followed by Factor 3 items that relate to practitioners' emotional connection. Items located towards the end of Table 3.4 apply to Factor 1 (i.e., emotional contagion). This pattern suggests that practitioners have rated themselves as displaying more consistently higher levels of cognitive empathy (a possible ceiling effect) and emotional connection as opposed to a greater degree of variation in their personal ratings on how emotionally affected they are by others' emotions.

Mindfulness

Across MAAS items displayed in Table 3.5, practitioners did not consistently provide high ratings on any item. The largest concordance across practitioners for a high rating of mindfulness was 78.5% for item 1 (Table 3.5) where practitioners selected that they "very infrequently" or "almost never" engage in snacking without being aware of eating. The MAAS does not possess a structure of factors by which items can be grouped. There are no clear differences between items where practitioners frequently provide higher ratings compared to those that are provided with less frequent higher ratings. A comment could be made however that practitioners provided relatively higher mindfulness ratings for some items that described specific behaviours, while lesser higher mindfulness ratings were provided for items that described more cognitive-related processing. Compared to responses provided on the BES-A, there is relatively lesser agreement in practitioner responses for specific items which collectively indicate higher mindfulness amongst practitioners.

Table 3.4: Descriptive statistics for items of the BES-A.

Items	Factor	Mean	SD	Min	Max	% "high"	Item-Total
1. I can understand my friend's happiness when she/he does well at something.	2	4.52	0.51	4	5	100	.48**
2. Other people's feelings don't bother me at all. (reverse scored)	3	4.67	0.48	4	5	100	.35*
3. I have trouble figuring out when my friends are happy. (reverse scored)	2	4.50	0.51	4	5	100	.59**
4. I can usually work out when my friends are scared.	2	4.07	0.34	3	5	97.6	.07
5. I can usually work out when people are cheerful.	2	4.33	0.53	3	5	97.6	.45**
6. I can usually realise quickly when a friend is angry.	2	4.26	0.50	3	5	97.6	.34*
7. I find it hard to know when my friends are frightened. (reverse scored)	2	4.24	0.53	3	5	95.3	.36*
8. When someone is feeling 'down' I can usually understand how they feel.	2	4.12	0.50	3	5	92.8	.10
9. Seeing a person who has been angered has no effect on my feelings. (reverse scored)	3	4.12	0.59	2	5	92.8	.47**
10. I am not usually aware of my friend's feelings. (reverse scored)	3	4.33	0.85	1	5	92.8	.48**

11. My friend's unhappiness doesn't make me feel anything. (reverse scored)	3	4.29	0.94	1	5	90.5	.29
12. My friend's emotions do affect me much. (reverse scored)	3	4.17	0.88	2	5	88.1	.17
13. I often become sad when watching sad things on TV or in films.	1	4.05	0.99	1	5	83.3	.12
14. After being with a friend who is sad about something, I usually feel sad.	1	3.60	0.94	2	5	66.7	.25
15. I can often understand how people are feeling even before they tell me.	2	3.71	0.84	1	5	64.3	.44**
16. I don't become sad when I see other people crying. (reverse scored)	3	3.71	0.97	1	5	64.2	.12
17. I get caught up in other people's feelings easily.	1	3.12	0.97	1	5	42.9	.14
18. I tend to feel scared when I am with friends who are afraid.	1	2.83	0.82	1	4	23.8	.15
19. I often get swept up in my friend's feelings.	1	2.79	0.84	1	5	19.1	.07

**. Correlation significant at the .01 level (2-tailed)

*. Correlation significant at the .05 level (2-tailed)

All scores based on N = 42 sample of practitioners. BES-A (5 point scale): 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree; Factor 1 = Emotional contagion; Factor 2 = Cognitive empathy; Factor 3 = Emotional connection; %"high" = the highest 2 possible scale responses; Item-Total = correlation with composite score across items of all measures

Table 3.5: Descriptive statistics for items of the MAAS.

Items	Mean	SD	Min	Max	% "high"	Item-Total
1. I snack without being aware that I'm eating. (reverse scaled)	5.17	0.94	3	6	78.5	.42**
2. I drive places on 'automatic pilot' and then wonder why I went there. (reverse scaled)	5.12	1.09	2	6	76.2	.48**
3. I break or spill things because of carelessness, not paying attention, or thinking of something else. (reverse scaled)	4.86	1.07	2	6	66.6	.55**
4. I rush through activities without being really attentive to them. (reverse scaled)	4.57	0.94	2	6	57.2	.44**
5. It seems I am "running on automatic," without much awareness of what I'm doing. (reverse scaled)	4.55	0.86	3	6	54.8	.50**
6. I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there. (reverse scaled)	4.62	0.91	3	6	52.3	.34*
7. I find it difficult to stay focused on what's happening in the present. (reverse scaled)	4.29	0.89	3	6	47.7	.57**
8. I find myself doing things without paying attention. (reverse scaled)	4.29	1.02	2	6	45.2	.42**
9. I do jobs or tasks automatically, without being aware of what I'm doing. (reverse scaled)	4.19	1.07	2	6	42.8	.52**

10. I find myself preoccupied with the future or the past. (reverse scaled)	4.14	1.10	2	6	40.5	.40**
11. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way. (reverse scaled)	4.05	1.10	1	6	38.1	.54**
12. I tend not to notice feelings of physical tension or discomfort until they really grab my attention. (reverse scaled)	4.00	1.13	2	6	35.7	.19
13. I find myself listening to someone with one ear, doing something else at the same time. (reverse scaled)	4.17	1.10	2	6	33.3	.55**
14. I could be experiencing some emotion and not be conscious of it until some time later. (reverse scaled)	3.88	0.99	1	5	31.0	.49**
15. I forget a person's name almost as soon as I've been told it for the first time. (reverse scaled)	3.67	1.44	1	6	26.2	.35*

**. Correlation significant at the .01 level (2-tailed)
*. Correlation significant at the .05 level (2-tailed)
All scores based on N = 42 sample of practitioners. MAAS (6-point scale): 1 = almost always, 2 = very frequently, 3 = somewhat frequently, 4 = somewhat infrequently, 5 = very infrequently, and 6 = almost never; %"high" = the highest 2 possible scale responses; Item-Total = correlation with composite score across items of all measures.

3.7.3 **Summary of items highly correlated with composite of all items**

The item analyses findings presented in Tables 3.3, 3.4, and 3.5 are presented in a condensed format in Table 3.6 with the aim of presenting information only on items across the three personal aspect measures for which practitioners' responses showed the highest correlation with items across the three measures using standardised composite scores ($r \geq .5$).

Table 3.6.Descriptive statistics for items across measures with item-total correlation values ($r \geq .5$)

Items (Measure item number)	Mean	SD	Min	Max	% "high"	Item-Total
1. I have trouble figuring out when my friends are happy. (E20) (reverse scored)	4.50	0.51	4	5	100	.59**
2. I find it difficult to stay focused on what's happening in the present. (M3) (reverse scaled)	4.29	0.89	3	6	47.7	.57**
3. I prefer to take the lead in solving problems rather than letting others make all the decisions. (R15)	2.55	0.74	1	4	54.7	.56**
4. I believe I can achieve my goals, even if there are obstacles. (R11)	3.00	0.73	1	4	78.6	.55**
5. I find myself listening to someone with one ear, doing something else at the same time. (M11) (reverse scaled)	4.17	1.10	2	6	33.3	.55**
6. I like challenges. (R23)	2.86	0.72	2	4	66.6	.55**
7. I break or spill things because of carelessness, not paying attention, or thinking of something else. (M2) (reversed scaled)	4.86	1.07	2	6	66.6	.55**
8. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way. (M4) (reversed scaled)	4.05	1.10	1	6	38.1	.54**
9. I do jobs or tasks automatically, without being aware of what I'm doing. (M10) (reverse scaled)	4.19	1.07	2	6	42.8	.52**
10. I take pride in my achievements. (R25)	3.24	0.79	1	4	83.4	.50**

**. Correlation is significant at the .01 level (2-tailed)
*. Correlation is significant at the .05 level (2-tailed)
All scores based on N = 42 sample of practitioners. R = Resilience, E = Empathy, M = Mindfulness; CD-RISC (5-point scale): 0 = not true at all, 1 = rarely true, 2 = sometimes true, 3 = often true, and 4 = true nearly all the time. BES-A (5 point scale): 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. MAAS (6-point scale): 1 = almost always, 2 = very frequently, 3 = somewhat frequently, 4 = somewhat infrequently, 5 = very infrequently, and 6 = almost never; %"high" = the highest 2 possible scale responses; Item-Total = correlation with composite score across items of all measures.

Only one item from the BES-A showed a high association: Item 1 in Table 3.6 reflected a high Item-Total value that may be related to practitioners' high concordance of responding, as practitioners selected scale ratings of 4 and 5 only (i.e., Min and Max responses). The remaining items while showing relatively high item-total associations also display a wider range of practitioner responses. In addition most items display face validity in respect to the delivery of psychotherapy, in particular item 5 which may be expected to be closely related to processes involved while working with patients. In contrast, items 7 and 8 do not appear to display a direct application to psychotherapy. However, for example, item 7 may reflect a person's tendency to not make overt mistakes while being mindful.

3.7.4 **Tests on personal aspect variability as a function of practitioners' key demographics**

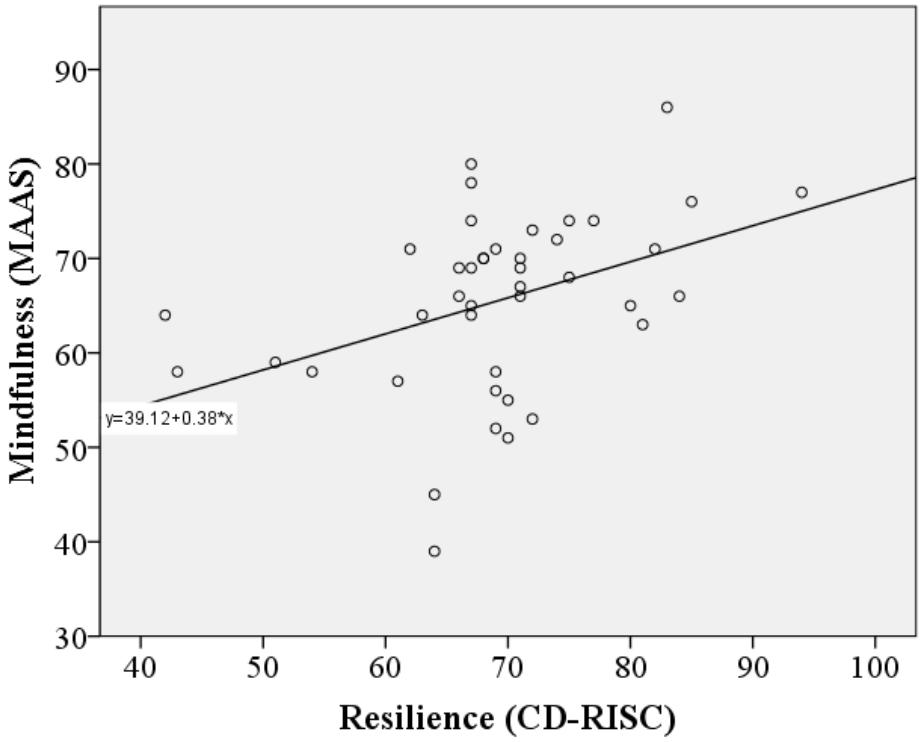
Practitioner personal aspect scores for each full measure were examined for gender differences as well as correlations across practitioners' age. Independent-samples t-tests revealed no significant differences between male (N = 10) and female practitioners (N = 32) for each personal aspect of resilience, t (40) = 1.11, p = .27; empathy, t (40) = -0.99, p = .33; and mindfulness, t (40) = 1.61, p = .12. Practitioners' age showed no significant correlation with each of each personal aspects measured: resilience, r = .18, p = .28; empathy, r = -.07, p = .67; and mindfulness, r = .31, p = .06, although the positive correlation between age and mindfulness appear to approach statistical significance.

3.7.5 **Relationship between personal aspect measures**

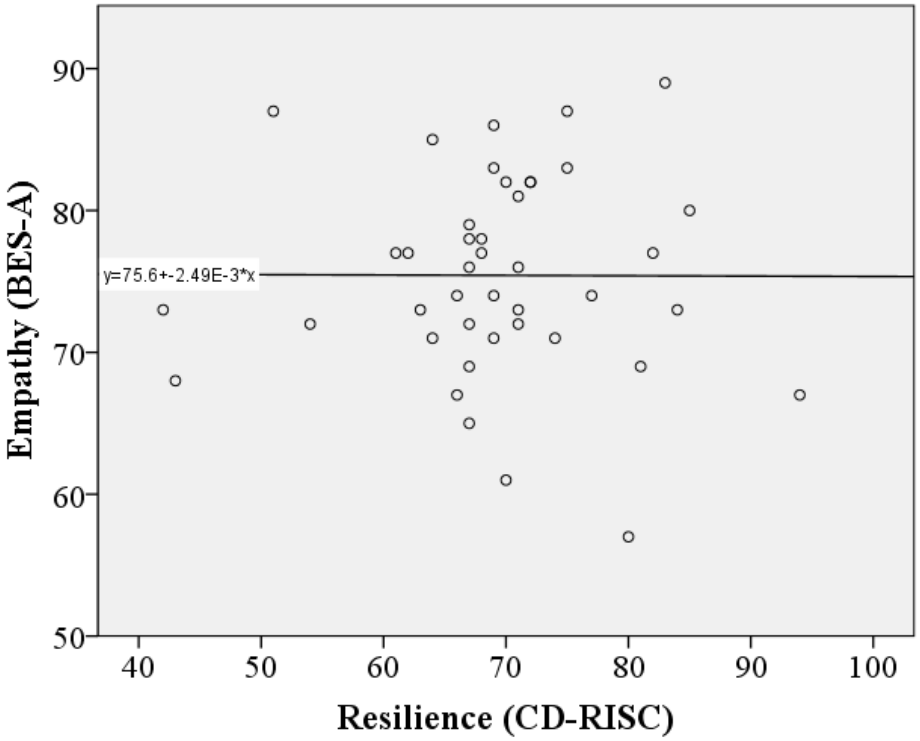
Figure 3.2 presents scatter plots for three possible pairwise combinations between the three personal aspect measures. Figures display a linear line of best fit generated by the SPSS program. Initial observations of the scatter plots suggest positive linear relationships between resilience and mindfulness. This relationship was similarly indicated by the diagonal line across the scatterplot in Fig 3.2a compared to the horizontal lines identified in Figs 3.2b and 3.2c. See Appendix IX for scatterplots including empathy factors.

Figure 3.2: Scatterplots of combinations of practitioner scores on measures of resilience (CD-RISC), empathy (BES-A) and mindfulness (MAAS) (N = 42).

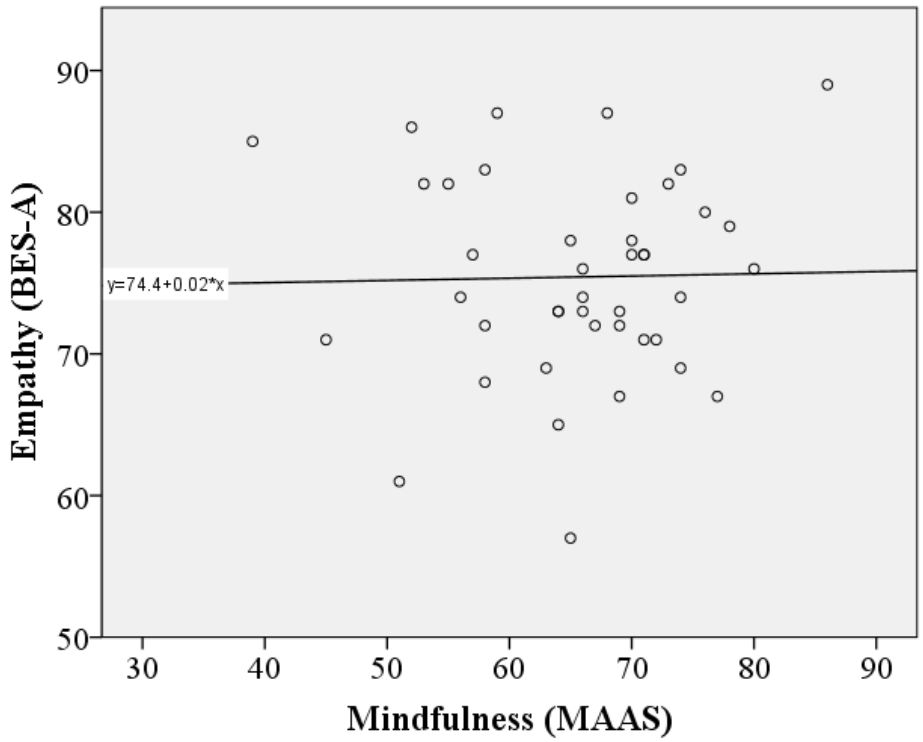
3.2a Resilience by Mindfulness



3.2b Resilience by Empathy



3.2c Mindfulness by Empathy



A Pearson's correlation analysis identified a significant positive correlation between resilience and mindfulness $r = .40$, $p = .01$, 95% CI [.11, .63], consistent with observations of the scatterplot (Fig 3.2a). No significant relationships were found between resilience and empathy, $r = -.004$, $p = .98$ and mindfulness and empathy, $r = .02$, $p = .90$. A correlation table including empathy factors is displayed in Appendix Xa.

Further correlational analyses were conducted across each practitioner group (i.e., PWPs, CBT therapists, and counsellors), across practitioners' treatment intensity provided (i.e., PWP low intensity and CBT therapists and counsellors high intensity treatment), and across practitioners' theoretical-orientation (i.e., CBT-oriented intervention and counselling).

Analyses on each *practitioner group*, namely PWPs (n = 11), CBT therapists (n = 12), and counsellors (n = 19) found a statistically significant association between resilience and mindfulness amongst responses provided by counsellors only $r = .61$, $p = .005$, 95% CI [.22, .83]. Amongst counsellors there was no significant relationship between resilience and empathy, $r = .19$, $p = .44$; and mindfulness and empathy, $r = .17$, $p = .48$. Correlational analysis on PWP responses showed no

significant relationships between resilience and mindfulness $r = .20$, $p = .56$; resilience and empathy, $r = -.09$, $p = .79$; and mindfulness and empathy, $r = -.46$, $p = .16$. Correlational analysis of responses provided by CBT therapists, similarly found no significant relationships between resilience and mindfulness, $r = .07$, $p = .82$; resilience and empathy, $r = -.31$, $p = .33$; and mindfulness and empathy, $r = .11$, $p = .73$. Detailed correlational tables are presented in Appendix X (b, c, d).

In relation to analyses of associations between personal aspects for practitioners grouped according to the *intensity of treatment provided*, no significant relationships were identified. Practitioner groups comprised of PWPs for low intensity treatment (n = 11) and combined CBT therapists and counsellors for high intensity treatment (n = 31). Responses by low intensity treatment practitioners showed no significant associations between resilience and mindfulness, $r = .20$, $p = .56$; resilience and empathy, $r = -.09$, $p = .79$; mindfulness and empathy, $r = -.46$, $p = .16$. Responses by high intensity treatment practitioners showed a significant associations between resilience and mindfulness, $r = .41$, $p = .02$, with no significant relationship between resilience and empathy, $r = .01$, $p = .94$; mindfulness and empathy, $r = .19$, $p = .30$.

Pearson's correlational analysis conducted on personal aspect responses were further conducted while grouping practitioners based on their *theoretical orientation*. Practitioner groups comprised CBT-oriented practitioners (i.e., PWPs and CBT therapists; n = 23) and counsellors (n = 19). Findings yielded a statistically significant positive relationship between resilience and mindfulness for counselling only $r = .61$, $p = .005$, 95% CI [.22, .83], with no significant relationship between resilience and mindfulness for CBT-oriented practice, $r = .22$, $p = .32$. There were no significant associations between other personal aspect combinations for the two practitioner groups; counselling practice resilience and empathy, $r = .19$, $p = .44$; counselling practice mindfulness and empathy, $r = .17$, $p = .48$; CBT-oriented practice resilience and empathy, $r = -.19$, $p = .39$; and CBT-oriented practice mindfulness and empathy, $r = -.18$, $p = .41$. Detailed correlational tables are presented in Appendix X (d and e).

3.7.6 **Differences in personal aspect scores between practitioner groupings**

Table 3.7 displays the means and standard deviations for resilience, empathy, mindfulness and additionally, a combined personal aspect variable of resilience and mindfulness (R+M). This latter personal aspect was created in consideration of research as described in Section 3.5 as well as the significant positive relationship between resilience and mindfulness observed in the current data.

Table 3.7: Descriptive statistics (Mean and SD) of personal aspects across practitioner groupings

	Sample size	Resilience (R)		Empathy (E)		Mindfulness (M)		Resilience & Mindfulness (R+M)	
		M	SD	M	SD	M	SD	M	SD
PWPs (low intensity)	11	63.27	12.82	74.91	6.67	60.36	10.94	-0.68	1.12
CBT therapists	12	70.75	7.67	73.92	7.70	64.58	8.48	0.03	0.73
Counsellors (Counselling oriented)	19	71.74	8.50	76.68	7.03	69.16	8.06	0.37	0.91
CBT & Counsellors (Hi intensity)	31	71.35	8.07	75.61	7.30	67.39	8.39	0.24	0.85
PWPs & CBT therapists (CBT-oriented)	23	67.17	10.90	74.39	7.08	62.57	9.75	-0.31	0.98
All practitioners	42	69.24	10.03	75.43	7.07	65.55	9.51	0.00	1.00

Descriptives on the four personal aspects are presented for each practitioner grouping according to i) practitioners' treatment approach (i.e., low intensity CBT intervention, CBT, and counselling), ii) treatment intensity (i.e., low intensity CBT intervention and high intensity CBT and counselling interventions), iii) theoretical orientation (i.e., counselling and CBT-oriented PWP and CBT interventions), and iv) all practitioners. All mean and SD values provided are scale dependent except for R+M. This latter aspect combination constitutes standardised scores to adjust for differences between the scales of the resilience (CD-RISC) and mindfulness (MAAS) measures. A visual presentation of personal aspect distributions across practitioner groups is presented in Figures

3.3a, 3.3b, and 3.3c. Bar graphs are presented using standardised scores to enable the display of all aspects in each figure. Bolded bars reflect where differences that were found to occur at a lower probability (i.e., $p < .05$) – that is, less likely to be due to chance alone. Figure 3.3a displays the distribution of personal aspect scores for each practitioner group (PWPs, CBT therapists, and counsellors). Figures 3.3b and 3.3c display the distribution of personal aspect scores between the differing treatment intensities provided and the differing theoretical treatment orientations respectively. Across the figures what can be clearly seen is that practitioners' mean personal aspect scores vary from the mean distribution scores ($Z = 0$) across all practitioner groupings.

A one-way independent ANOVA was conducted between the three different practitioner treatment groups (PWPs, CBT therapists and counsellors) together with two independent samples t-tests for other comparisons: between groups of differing treatment intensity (PWPs vs. combined CBT therapists and counsellors); and between groups of differing theoretical orientation (counsellors vs. combined PWP and CBT practitioners). The three tests were conducted for each of the four personal aspect variables (i.e., resilience, empathy, mindfulness, and combined resilience and mindfulness R+M), giving a total of 12 tests.

For the exploratory analyses of comparisons between *treatment approaches*, a one-way independent ANOVA found no statistically significant differences between the three practitioner groups on resilience scores, $F(2, 39) = 2.92$, $p = .07$, and empathy scores, $F(2, 39) = 0.59$, $p = .56$, but significant differences across mindfulness scores, $F(2, 39) = 3.43$, $p = .04$, and R+M scores, $F(2, 39) = 4.57$, $p = .02$. In Fig 3.3a, the two right bar clusters display a relatively larger discrepancy between the three practitioner groups. It appears that the increased spread may be related to counsellors' relatively higher scores on mindfulness and R+M compared to their respective scores in resilience and empathy.

Figure 3.3: Bar graphs displaying distributions of personal aspect variables (resilience, empathy, mindfulness and combined resilience and mindfulness)

Figure 3.3a: Between PWPs, CBT therapists and counsellors

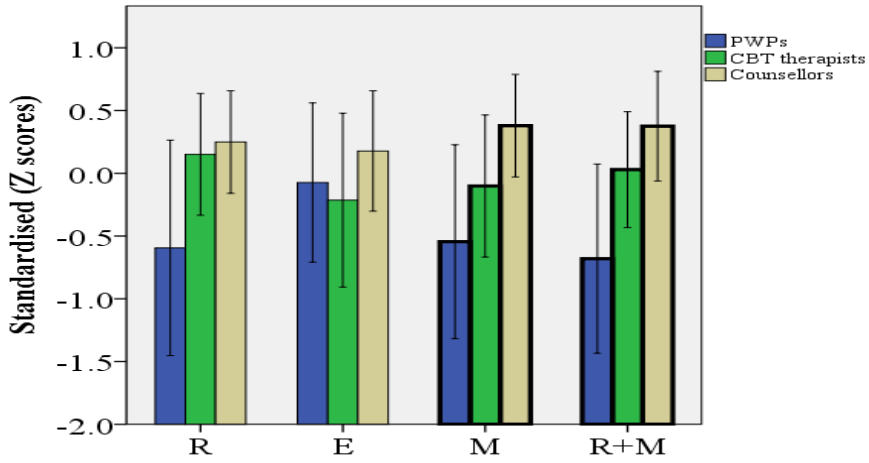


Figure 3.3b: Between practitioners who deliver low intensity (i.e., PWPs) and high intensity interventions (i.e., CBT therapists and counsellors)

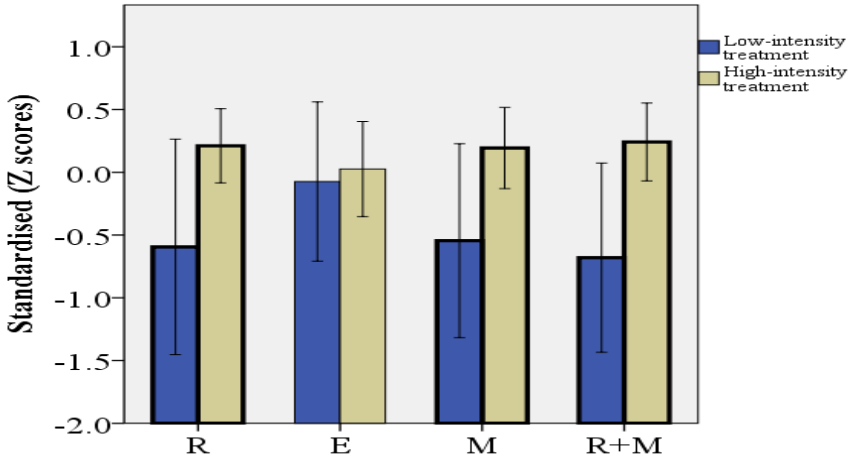
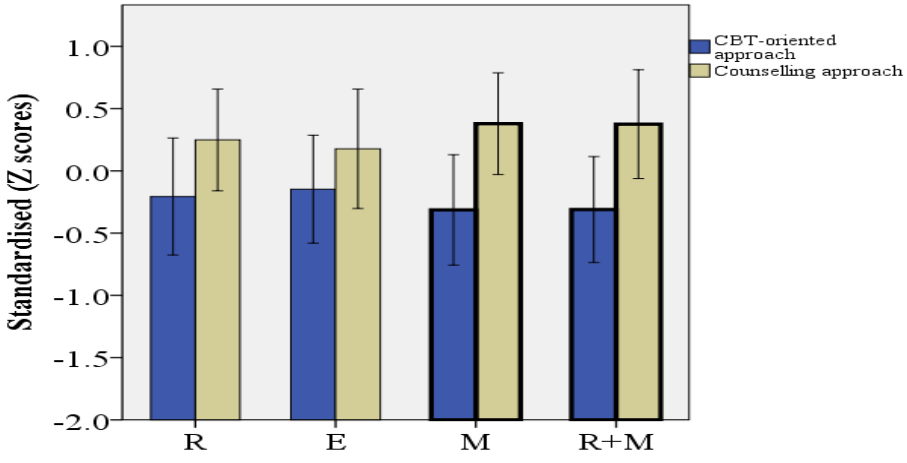


Figure 3.3c: Between practitioners who deliver CBT-oriented intervention (i.e., PWPs and CBT therapists) and practitioners who deliver counselling



Independent samples t-tests on comparisons between *treatment intensity* involved low intensity (PWP treatment, n = 11) and high intensity (CBT therapy and counselling, n = 31) practitioner groupings. The comparison of practitioners' empathy yielded no statistically significant difference, empathy, t (40) = -0.28, p = .78, effect size r = .04, 95% CI[-.26, .34]. In contrast, differences in scores of resilience, mindfulness, and R+M showed probabilities of $p < .05$: resilience, t (40) = -2.43, p = .02, effect size r = .36, 95% CI[.06, .60]; mindfulness, t (40) = -2.20, p = .03, effect size r = .33, 95% CI[.03, .58]; and R+M, t (40) = -2.84, p = .01, effect size r = .41, 95% CI[.12, .64]. Figure 3.3b reflects the variability of personal aspect scores between low and high intensity treatment. It is visually evident that low and high intensity practitioners vary by a relatively greater degree in resilience, mindfulness and R+M scores compared to smaller degree of variability in empathy scores.

Exploratory independent samples t-tests comparing practitioners' *theoretical orientation* (i.e., CBT-oriented practice provided by PWPs and CBT therapists versus counselling practice) found no statistically significant difference across personal aspects of resilience, and empathy: resilience, t (40) = 1.49, p = .14, effect size r = .23, 95% CI[-.08, .50]; empathy, t (40) = 1.05, p = .30, effect size r = .16, 95% CI[-.15, .45]. Significant differences, however, were identified across mindfulness, and combined resilience and mindfulness: mindfulness, t (40) = 2.36, p = .02, effect size r = .35, 95% CI[.05, .59]; R+M, t (40) = 2.33, p = .03, effect size r = .35, 95% CI[.05, .59]. Figure 3.3c shows in bolded bars where significant differences were found. Bar clusters on mindfulness and R+M reflects a relatively larger degree of variability compared to those on resilience and empathy, similarly related to counsellors relatively higher scores in mindfulness and combined resilience and mindfulness.

In summary, Study I analyses revealed a statistically significant positive correlation between resilience and mindfulness across all practitioners and specific to counsellors. Related to this finding, there was evidence that high intensity practitioners (i.e., CBT therapists and counsellors) displayed a similar significant relationship. ANOVA analyses of personal aspects between different groups of practitioners identified significant differences in respect to practitioners' mindfulness and combined resilience and mindfulness. These differences exist between PWPs, CBT therapists and counsellors. A significantly higher level of resilience was found in high intensity compared to low intensity

treatment. Differences in empathy between practitioner treatment intensity and treatment orientation were not significant ($p \geq .05$). Significantly higher levels of mindfulness and combined resilience and mindfulness were found amongst high compared to low intensity practitioners, and in counselling compared to CBT-oriented practice.

3.8 **Discussion**

The current discussion addresses study-specific findings. Further discussion of the current findings is provided in context of all studies in Chapter 8. Study I examined personal aspects of resilience, empathy and mindfulness as enduring traits which possess the potential for positively influencing practitioners' delivery of their treatment approach. As natural-occurring phenomena, there was variability in practitioners' self-ratings for each personal aspect.

Analyses of itemised ratings for resilience suggested that the majority of practitioners identified with being resilient through personal competence, maintaining high standards and tenacity. Practitioners' item ratings for empathy however suggested some variation in practitioners' collective ratings. Practitioners provided relatively higher ratings for their capacity to cognitively understand and allow themselves to be emotionally connected with another's emotion. In contrast, there was less agreement of high empathy related to being emotionally affected by others' emotions. The ratings may suggest for qualities of empathy that facilitate or enhance practice as well qualities of empathy that may have a negative bearing on practice.

Across personal aspect measures, resilience and mindfulness were positively correlated for all practitioners, especially for counsellors. The findings suggest that these personal aspects are more highly related in counsellors. The positive relationship between mindfulness and resilience suggests that as one personal aspect increases or reduces, the other personal aspect increases or reduces as well. Following from research findings, practitioners may draw on mindfulness that both enables and informs resilient responses. Mindfulness has been found to facilitate faster recovery from stress, thereby allowing a person to respond with resilience (Davidson, 2000; Davison, 2013). Evidence has also indicated that mindfulness facilitates more autonomously motivated behaviour that could inform resilient responses (Levesque & Brown, 2007).

In respect to specific personal aspects between practitioner groups, significant differences were identified in relation to resilience, mindfulness, and combined resilience and mindfulness. In respect to resilience, high intensity practitioners (i.e., CBT therapists and counsellors) were found to display a significantly higher level of this personal aspect compared to low intensity PWPs. This could be explained by the fact that high intensity practitioners work with more severely depressed patients. In doing some, these practitioners learn to persevere and/or remain committed to their patients in light of possible complexities that patients may present with. In contrast, conceptually low intensity practitioners while working with less severely depressed patients may encounter a lesser degree of complexity with patients who present with a relatively higher level of functioning, thereby drawing on a relatively lesser degree of resilience (e.g., personal tenacity and drive).

A similar pattern of differences was identified for both mindfulness and combined resilience and mindfulness. High intensity, in contrast to low intensity, practitioners displayed a significantly higher level of each of these personal aspects. In addition, counsellors displayed a higher level of these personal aspects when compared to practitioners of CBT-orientation (i.e., PWPs and CBT therapist combined). Perhaps there is something about the different theoretical approaches and patient intensity levels that has a bearing on practitioners at a personal level. Practitioners may be systematically influenced by which theoretical approach they deliver and by the severity levels of their patients. In respect to theoretical approaches, it is arguable that differences across the practitioner groups may be evident moreso between counsellors and PWPs, given that PWPs face limitations on the duration of treatment they provide (compared to CBT therapists). With the provision of brief treatment by PWPs, there may be a greater necessity for PWPs to rely more on the CBT-oriented treatment that they deliver. Looking at patient severity levels, perhaps practitioners who work with more severely depressed patients may learn that they need to adapt to these patients more so than practitioners who work with patients who are less affected by their psychological condition. Practitioners of more severely depressed patients may draw on mindfulness to better understand their patients while with them in the present moment. Furthermore these practitioners may also utilise this understanding to respond with resilience to their patients.

The influence of practitioners' theoretical orientation and patient severity levels may be moderated by practitioners' age. In the current sample, counsellors who comprise of older practitioners appear to consistently display higher levels of mindfulness and combined resilience and mindfulness. Mindfulness has been associated with eudaimonic wellbeing, equanimity and spiritual expressions suggestive of wisdom. Perhaps older practitioners are less susceptible to reacting to events (for example, patient presentations) and find it easier to remain in the present moment given their relatively more extensive life and work experiences.

The current thesis set out to examine how practitioners' personal aspects influence their delivery of effective practice. Findings from Study I suggest that there may exist systematic differences between practitioners on these personal aspects. These vary across practitioners' age, theoretical-orientation, and the level of patient severity they treat. In short, personal aspects may not work in isolation to influence practice, but may be influenced by practice as well.

Perhaps in order to explain some of the difference, it may be useful to consider the different structures of the treatment approaches and the professional socialisation through which respective practitioners may progress. CBT follows more closely a medical model where patients receive a diagnosis – or at least a quasi-diagnostic condition – followed by the appropriate treatment, akin to a medical patient who receives a diagnosis and is prescribed the appropriate medication or treatment. This is in contrast to counselling that is less determined by diagnostic labels and with a different philosophical view of the patient. Comparatively, it is easier for practitioners of CBT to place a greater reliance on prescribed treatment procedures that may preclude the engagement of non-discriminatory observing that is characteristic of being mindful. The results bear some relationship with findings from Stanley et al. (2006) and colleagues where mindfulness was described as being counter-indicative when applied to manualized treatments. As mentioned above, PWPs provide CBT interventions within a brief time period. Therefore they may be more likely to follow CBT procedures more closely to ensure the sufficient delivery of necessary interventions.

The interpretations of findings are limited by the small sample size of practitioners in each respective discipline. Study I comprised one of five studies in this programme of research that

adopted a mixed method approach. Accordingly, the questionnaire comprised both quantitative and qualitative components. In terms of this demand on potential participants, the response rate of 36% from service practitioners was credible given their heavy work burden of all professionals working with the UK IAPT service. It was evident from informal feedback that the burden of time arose from completion of the qualitative components and it is likely that some practitioners did not participate due to this component. Had Study I been a stand-alone study (i.e., without the qualitative component), the response rate would likely have been higher and the results, therefore, more robust. On reflection, a two-stage approach in which stage 1 comprised only the quantitative measures and an invitation to partake in a second stage comprising a qualitative component might have been a better strategy although it would likely have yielded fewer respondents in the latter stage.

Notwithstanding this evaluation, the current study reveals findings associated with practitioners' group differences in relation to mindfulness and the relationship between mindfulness and resilience. The current sample size limits further analyses of these within the respective practitioners' sub-groups. The subsequent studies (Studies II to V) examine practitioners as one heterogeneous sample and personal aspects are measured as unitary constructs (i.e., without reference to factors or subscales).

4 Chapter 4

Study II: Personal aspects unique to more effective practice:

Single level analysis

4.1 Introduction

The current study – Study II – extends research on resilience, empathy, and mindfulness beyond the person of the practitioner to their associations with clinical effectiveness. Study II aims to define the personal aspects that are unique to practitioners who yield consistently better patient outcomes. The following sections provide a brief overview of what psychotherapy research has yielded in respect to understanding therapist qualities and their association with better patient outcomes.

An extensive overview of research on therapist variables was provided by Beutler et al. (2004). Published in the 5th edition of *Bergin and Garfield's handbook of psychotherapy and behavior change* (2004), the review was not an isolated review, but rather reflected successive developments of research on therapists from the four prior editions of the *Handbook (1971, 1978, 1986, & 1994)* together with meta-analyses of studies carried out from the mid-1970s onwards (e.g., Beutler, Crago, & Arzmendi, 1986; Beutler, Machado, & Neufeldt, 1994). Beutler et al. (2004) reviewed studies published within the prior 10 – 20 years that examined clinical populations and used reliable outcome measures. The authors extracted 327 effect sizes from 141 studies applicable to 16 therapist variables. Therapist variables were classified across therapists' observable traits (e.g., *age, race, and sex*), observable states (e.g., *professional experience, interpersonal psychotherapy style, professional discipline and classes of interventions*), inferred traits (e.g., *values, attitudes, beliefs, general personality and coping patterns, emotional wellbeing*), and inferred states (e.g., *theoretical orientation and therapeutic relationship*). Out of the 16 variables, a degree of consistency in the findings with patient outcome was identified for therapists' inferred traits of well-being (r = .12) and cultural attitudes (r = .13), as well as therapists' inferred states related to therapeutic relationship (r = .22) and theoretical orientation (r = mid .30s).

The authors emphasised that research concerning the role of patient moderating variables with therapist variables was needed. That is, for therapist variables to be studied relative to patient variables rather than in absolute terms. Study II takes into account practitioner personal aspects of resilience, empathy and mindfulness. While these personal aspects are specific to practitioners, by their conceptual nature, they operate to facilitate practitioner responses specific to individual patients. Hence, in Study II, practitioner personal aspects of resilience, empathy, and mindfulness are examined as a function of effective practice.

From a methodological perspective, Study II adopts a traditional single level data analysis strategy for identifying practitioners who deliver more effective and less effective practice. The following chapter reports on Study III that uses the same data but analysed using multilevel modelling. As reflected in Chapter 2 (Figures 2.1a and 2.1b), data is more recently and increasingly being analysed using MLM. This is in contrast to using traditional single-level analysis where patients are assessed as independent regardless of their treating practitioner or where patients are assessed at an aggregate level of their treating practitioner. Although the argument has been made (see Chapter 2) for adopting multilevel modelling in preference to single level analysis, the aim in this thesis is to compare the results arising from each approach given that there is no known study that has compared the two analytical approaches using a common data set.

Accordingly, Study II utilises traditional benchmarking strategies to rank practitioner effectiveness across different bands of patient severity. The ranking is then used to identify practitioner personal aspects unique to more effective practice compared to less effective practice across initial patient severity levels (i.e., from mild depression to severe depression). The following section first provides an overview of methodological issues inherent when treating patient outcome as single level data and then presents the significance of investigating patients within different severity bands.

4.2 **Methodological considerations**

4.2.1 **Generalisability of research findings**

Researchers using single level data analysis need to be mindful in determining the following: i) how the practitioner factor is to be analysed (i.e., as fixed or random), and ii) subsequent interpretations of findings, particularly in relation to their analysis of participating practitioners. In a landmark review, Martindale (1978) criticized an erroneous statistical approach towards practitioners. Amidst a prevalent culture that presumed therapists to be uniform (Kiesler, 1966), the review brought attention to the fact that psychotherapy research involved sampling both patients and practitioners. The review showed that of 33 studies, the majority (21; 63%) ignored the practitioner factor, and only one study (3%) treated practitioners as a random sample. Martindale also noted that although practitioners were not analysed as a sample of a practitioner population, researchers were nonetheless generalising findings beyond the practitioners involved in studies.

Following from Martindale's critique of researchers' analytical methodology and interpretation, Crits-Christoph and Mintz (1991), in a review of 114 studies (published 1980–1990), similarly raised concerns over the continued use of flawed methodology. Of the 114 studies, the majority (77; 67%) of studies ignored the practitioner factor with only four studies (3.5%) conducting appropriate analysis (i.e., treating the practitioner factor as random or conducting appropriate preliminary analysis). More recently and drawing from Baldwin and Imel's (2013) comprehensive list of therapist effect studies, it is apparent that a shift has occurred: out of 55 identified studies (published post 1990), 38 (69%) studies treated the practitioner factor as random. Notably, out of these, 38 studies, 17 (45%) adopted multilevel analysis.

4.2.2 **Methodological considerations related to examining practice-based evidence**

The requirement for researchers to be cognizant of statistical assumptions applies equally, or perhaps more so, to the analysis of practice-based evidence (Field, 2011; Hox, 2010). The analysis of data from routine practice provides a rich and appropriate environment in which to examine the natural phenomenon of therapist effects without constraints associated with trials methodology. This

can be illustrated when comparing therapist effect sizes between routine practice sites and efficacy trials. Research has yielded relatively smaller estimates of therapist effects in the latter with mean effect sizes of .07 and .03 respectively (Baldwin & Imel, 2013). This contrast is possibly due to the high internal validity of efficacy trials, where therapist effects may be minimized given the treatment of more homogenous clients who meet the trial inclusion/exclusion criteria, high therapist training, adherence to treatment manuals and often very close supervision. While effect sizes in routine practice data may be more reflective of the naturally occurring phenomenon (Baldwin & Imel, 2013), researchers may be faced with complex interdependent data (e.g., patients being treated by multiple practitioners, practitioners treating multiple patients, or practitioners providing varying treatments), missing values, and unequal sample sizes. All these factors constitute challenges or significant violations in respect to parametric assumptions of single level data analysis (Field, 2009; Kenny & Judd, 1986).

In practice, psychotherapy researchers have adopted benchmarking strategies in their single level data analysis of routine practice data (for a review, see Castonguay, Barkham, Lutz & McAleavey, 2013). The authors commented that practice data required a comparator against which to locate its outcomes. This led to approaches of benchmarking which, while attractive and incurring relatively low cost, present certain limitations. These limitations include an inability to account for differential doses of treatment and the selection of what benchmark to use. Study II reports on the dose of treatment received by patients, and practitioners are benchmarked against the upper and lower quartile of the general level of effectiveness of practitioners working within the same service.

4.2.3 **Statistical issues**

Statistical issues arise when multilevel data is fitted into a single level data structure. Using single level analysis, multi-level data may be analysed at a lower level (i.e., patient level), where practitioner variables are disaggregated. This results in a larger sample(s) of lower level disaggregated practitioner variables, which in turn leads to under-estimates of variability (i.e., smaller standard errors) and false positive findings or Type 1 errors (Hox, 2002; Stride, 2013). Alternatively, the data may be analysed at a higher level where lower level data is aggregated resulting in different

data values and loss of raw information. The most widely used approach across single level data analysis to identify therapist effect sizes has been analysis of variance (ANOVA; Baldwin & Imel, 2013; Blatt, Sanislow, Zuroff & Pilkonis, 1996; Crits-Christoph & Mintz, 1991). This approach is used to identify whether systematic groups of patients treated by different practitioners differ in their outcomes whilst controlling for patient pre-treatment severity.

A notable example is the post hoc study by Blatt and colleagues (1996) of data from the RCT of the National Institute of Mental Health Treatment of Depression Collaborative Research Program. The practitioner factor was treated as fixed. An aggregate of patient outcome scores (i.e., higher level estimates) was calculated to assess each of 28 practitioners' overall efficacy. This aggregate constituted a composite of five residualised patient change scores of the five patient outcome measures administered, averaged across all patients of each practitioner. A distribution of practitioners' effectiveness scores (i.e., average aggregate scores) was internally benchmarked (i.e., comparing practitioners with each other in the study sample). The distribution was divided into thirds and practitioners were grouped as "more effective", "moderately effective" and "less effective". To assess therapist effects, the error value used was derived from the mean variability within practitioners of patient outcome scores. Multiple ANOVAs were conducted examining variability across all practitioners and the different combinations of practitioners (i.e., more effective practitioners and less effective practitioners, more effective and moderately effective practitioner, as well as less effective and moderately effective practitioners). The authors identified significant findings when examining only more effective and less effective practitioners. This finding supports the approach adopted in the current study (Study II), where comparisons are made only between the more effective and less effective practitioners.

4.2.4 **Conceptual issues**

Researchers applying single level analyses to multilevel data need to be cautious regarding findings as there are relatively more risks for making erroneous interpretations if data are analysed at one level and interpretations of findings are subsequently made at another level. Fallacies commonly cited include the ecological fallacy (i.e., a fallacy of drawing lower-level inferences based on analysis

conducted at a higher-level; Robinson, 1950) and 'Simpson's Paradox' (i.e., where completely incorrect conclusions are drawn if group data comprise heterogeneous populations, collapsed, and analysed as homogeneous; Diez-Roux, 1998; Hox, 2002).

Single level data analysis studies of therapist effects have assessed systematic variability of practitioner demographics alongside the primary analysis of therapist effects. Reporting on practitioner demographics acts as a means of protecting against making inaccurate inferences of findings that may be accurately attributed to practitioner variables rather than practitioner effectiveness (i.e., protecting against Simpson's Paradox). Examining practitioner variables is illustrated also in Blatt's (1996) study described earlier. Higher-level practitioner demographic and professional variables were tested for systematic differences across the three groups of practitioners. The variables included practitioner, age, sex, race, marital status, clinical experience level, religion, professional level, and type of therapy delivered. The characteristics identified as unique to more effective practitioners included the presence of psychological mindedness and having less of a biological orientation towards patient treatment.

4.3 **Patient depression severity and practitioner effectiveness**

Saxon and Barkham (2012) examined therapist effects in a large routine practice dataset of 10,786 patients, treated by 119 practitioners within U.K. primary care counselling and psychological therapy services. In particular, the study examined therapists' contribution to patient outcome as a function of patients' pre-treatment severity of psychological distress. Patient pre-treatment and outcome data comprised scores on the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM: Barkham et al., 2001; Barkham, Mellor-Clark, Connell, & Cahill, 2006; Evans et al., 2002). Results indicated that as patient pre-treatment scores increased (excluding risk scores) from mild to severe, the size of the therapist contribution increased from approximately 4% to up to 10%. As the outcomes of relatively more severely distressed patients systematically varied to a greater extent than that of patients who were mildly distressed, the authors explained that when treating patients who are severely symptomatic, it matters more who is providing the treatment.

The Saxon and Barkham (2012) study provides a platform for the current study design using the Patient Health Questionnaire–9 (PHQ-9; Spitzer, Kroenke & Williams, 1999) to similarly examine patient depression severity. Although the CORE-OM, as a measure of psychological distress, is pan-diagnostic with no focus given to a single presenting problem, it is comparable to the PHQ-9, which focuses on assessing patient depression and is the primary outcome measure adopted in Study II. Gilbody, Richards, and Barkham (2007) found that both the CORE-OM and the PHQ-9 are sensitive (91.7% sensitivity for both measures) and able to specifically measure depression (76.7% and 78.3% specificity respectively) using patient-self report, in contrast to using an extensive therapist-rated measure (i.e., the Structured Clinical Interview for DSM; Spitzer, Williams, Gibbon, & First, 1992).

Apart from systematic variation of therapist effects across patient severity levels, research findings have shown that practitioner effectiveness (reflected in their proportion of patients' recovery rates) differ considerably depending on patients' initial severity levels. Mullin, Barkham, Mothersole, Bewick, and Kinder (2006) benchmarked client-rated CORE-OM scores of 11,953 patients (69.4% presenting with depression) treated by 513 practitioners who provided counselling and psychological therapies across 32 routine primary care services. More effective practice (based on a ranking above the 75th percentile compared to other practitioners) yielded 58% recovery rate of all patients, increasing to a 73% recovery of patients with mild – moderately severe distress, with a 58% recovery of patients with severe distress. Differences in proportions are likely to vary as a function of the authors' application of Jacobson and Truax's (1991) criteria for reliable and clinically significant change. Criteria that patients with a mild to moderately severe psychological conditions are more likely to meet compared to patients with severe psychological conditions. These findings suggest that it is important to take into consideration the severity of patients' conditions when assessing practitioner effectiveness, as this could constitute a confound given practitioners have a varying case-mix of patients and overall effectiveness rankings could be largely determined by whether a practitioner has a majority of patients with moderate or severe distress. By measuring practitioner effectiveness within different patient severity bands, the current study has sought to more accurately examine practitioner effectiveness.

4.4 **Method**

4.4.1 **Design**

Study II proceeds from Study I with the aim of investigating the personal aspects of a subsample of practitioners whose data provide the basis for further examination in subsequent studies in this thesis. This subsample comprises practitioners whose personal aspect data (i.e., resilience, empathy, and mindfulness) was possible to be yoked with clinical outcome data for the patients treated by those practitioners. Comparisons are made between the yoked respondent subsample (N = 37) against the findings from the total respondent sample (N = 42). The study is designed to identify the personal aspects that differentiate between more effective and less effective practice, treating data as single level data and using quartile benchmarking. Correlational analyses and independent samples t-tests were conducted using IBM SPSS Statistics version 21 software programme. Confidence intervals were derived using a web-based calculator of confidence intervals for correlations – how2stats ("how2stats," 2015).

4.4.2 **Setting**

In the UK, the National Institute for Health and Clinical Excellence (NICE) endorses a range of evidence-based psychological therapies to treat people with different degrees of depression and anxiety. Improving Access to Psychological Therapies (IAPT) utilises a stepped-care service model approach to deliver NICE guidelines and so match type and degree of psychological condition (depression and/or anxiety) with appropriate level of treatment (Clark, 2011). In the stepped-care model patients with common mental health problems are seen by a GP (step 1) for psychotropic medication treatment or "watchful waiting" (also proposed by the developers of PHQ-9 for patients with mild scores of depression; Kroenke & Spitzer, 2002) or referred to Psychological Wellbeing Practitioners (PWPs) (step 2) who conduct an assessment of patients using the Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., 1999), Generalised Anxiety Disorders-7 (GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006), and the Work and Social Adjustment Scale (WSAS; Mundt, Marks, Shear, & Greist, 2002).

PWPs provide low-intensity treatment in the form of guided self-help approaches to patients with mild to moderate levels of depression and/or anxiety. Those patients assessed as severe or non-responsive to PWP treatment are referred to receive traditional high-intensity treatment (step 3) by CBT therapists or counsellors. Patient "caseness" or classification of severity of depression and/or anxiety for step 3 referral is ascertained using patient scores on the PHQ-9, the GAD-7 and clinical judgement. Across steps 2 and 3 practitioners receive on-going discipline-specific training, supervision, and reviews on adherence to their theoretical approach in clinical supervision. During supervision, regular feedback is provided regarding rates of patient change. Study II involves analysis of a heterogeneous sample of practitioners providing low or high intensity treatment with their respective patients who were referred to them based on the stepped-care model approach described.

4.4.3 **Participants – Selection of patient study sample**

Mandatory IAPT data collection ensures that patient outcomes are collected at each and every session. A download of the service patient outcome dataset was obtained for a period of 3 years and 5 months (June 2010 to October 2013). The patient outcome data for Study II consisted of anonymised pre- and post-treatment scores on depression (PHQ-9), anxiety (GAD-7), and functioning (WSAS). Demographic information on patients comprised age, gender, ethnicity, index of multiple deprivation (IMD; i.e., deprivation index related to patients' geographical location of residence), employment status, and medication status. In the dataset, each patient had a practitioner identity number to match practitioners to their respective patients.

The original patient outcome data was received by a data custodian. This raw data included n = 39,520 patients treated by n = 163 practitioners. Data was classified across 'care periods' within which each patient received one or more 'episode of care'. Patients occasionally received treatment from different practitioners within and between each episode of care. The raw data included patients who received treatment in the form of individual sessions and/or group sessions. The treatments delivered comprised low intensity treatment, high intensity treatment, mixed therapies, couple therapy, and psychoeducation. Within the current patient dataset, missing items were prevalent in

relation to what treatment approach was provided, patient demographics, and patient pre-treatment outcome scores.

The final dataset was selected to include practitioners with a minimum outcome data of 20 patients that included patients of different severity levels. This was decided as the minimum sample size of patients per practitioner given the characteristics of the data download (i.e., taking into account the number of practitioners and the prevalence of missing data or data completeness). Patients comprised those who received only individual low (PWP) or high intensity (CBT or counselling) treatment and excluded patients who received group treatment. Each patient received treatment from one practitioner only. Patients with no demographic details and missing pre-treatment outcome scores were excluded.

The selected dataset comprised 25,420 patients treated by N = 137 practitioners (M = 185.5, SD = 162.1). The resulting yoked dataset for Study II comprised 5,408 patients treated by 37 practitioners (M = 146.2, SD = 111.6).

4.4.4 **Participants - Patients**

The 5,408 patients in the yoked dataset, using PHQ-9 depression severity bands, presented with mild to severe symptoms of depression (92.1%) and/or anxiety (91.1%) and received low intensity or high intensity treatment. On average, patients presented with moderate levels of depression and anxiety: mean pre-therapy scores for depression and anxiety were 14.5 (SD = 6.5) and 12.7 (SD = 5.4) respectively. There was no experimental random assignment of patients to therapists. Allocation of patients to high intensity practitioners (i.e., CBT therapists or counsellors) was determined by factors including patients' treatment preferences, the availability of counsellors or CBT therapists in patients' respective local GP surgeries and patients' ability to travel to adjoining GP surgeries if necessary. The number of sessions received by patients ranged from 1 - 33 with a modal number of 1 session provided to 1,848 patients (34.2%) and a mean of 4 sessions (SD = 4.1). Relevant to the focus of Study II, related information and analysis is conducted in respect to patient depression only.

A summary of patient demographics in the research sample is provided in Table 4.1. The majority were female (67.0%), with almost half of all patient aged between 30 and 49 (47.4%). The majority of patients were of white ethnicity (89.8%) and not unemployed (71.2%; i.e., employed full-time or part-time, full-time homemaker, student or retired).

Table 4.1: Patient demographics of practitioner respondents with yoked data

	n	%
Sex		
- Male	1779	32.9
- Female	3625	67.0
Age		
- 15 – 29	1249	23.1
- 30 – 49	2565	47.4
- 50 – 69	1417	26.2
- 70 – 89	177	3.3
Ethnicity		
- White	4859	89.8
- Asian	179	3.3
- Black	118	2.2
- Mixed	116	2.1
- Other	108	2.0
Employment		
- Unemployed	1556	28.8
- Not unemployed	3852	71.2
Depression (PHQ-9 pre-treatment score)		
- None (0-4)	428	7.9
- Mild (5-9)	897	16.6
- Moderate (10-14)	1286	23.8
- Moderately Severe (15-19)	1395	25.8
- Severe (20–27)	1402	25.9
Number of practitioners:		
- PWPs	8	21.6
- CBT therapists	12	32.4
- Counsellors	17	45.9
Treatment received		
- Low intensity (PWP)	2358	43.6
- High intensity (CBT)	1292	23.9
- High intensity (Counselling)	1758	32.5

The distribution of patients receiving low or high intensity treatment indicate that 21.6% (n = 8) of the practitioner sample were PWPs who provided treatment to 43.6% (n = 2358) of the patients: a ratio of 295 patients per PWP. In contrast, CBT therapists who comprised 32.4% (n = 12) of the yoked practitioner sample treated 23.9% (n = 1292) patients: a ratio of 108 patients per CBT therapist. Counsellors, comprising 45.9% (n = 17) of the practitioners treated 32.5% (n = 1758) patients, yielding a ratio of 103 patients per counsellor. The varying ratios reflect the nature of low intensity treatment that enables treatment provision for more patients with lower levels of depression (i.e., "low contact, high volume") and may also be affected by the variation in practitioners' hours of work per week as a function of number of patients treated.

In terms of patient depression severity and the corresponding treatment allocated, Table 4.1 reflects a sum of 2611 patients with less than moderately severe depression (i.e., 428 + 897 + 1286). It is indicated that a proportion of these less severe patients received low intensity treatment (n = 2358) – that is, 2358 of 2611 (90.3%). Correspondingly, more patients received high intensity treatment (1292 + 1758 = 3050) than the sum of patients with moderately severe to severe levels of depression (1395 + 1402 = 2792). Some patients with less severe depression (indicated by PHQ-9 scores) received high intensity treatment. Note that the information provided relates to patient depression only. Variations between values may reflect variation in patient diagnosis and patient 'caseness' as determined by clinical judgement.

4.4.5 **Participants - Practitioners**

Of the sample of 42 practitioner respondents in Study I, 37 (88.1%) had patient outcome data that could be analysed to determine an effectiveness ranking and then be yoked with practitioner personal aspect responses. Five practitioners did not have sufficient patient outcome data. These practitioners comprised a new employee, a trainee, a practitioner with no patient outcome data, and two practitioners with substantial missing data on patient outcome scores and demographic information.

Table 4.2 provides a summary of practitioner demographics compared with the demographics of the total practitioner sample (n = 42) and that of the subsample of practitioners with yoked data (n

= 37). The subsample of practitioners have comparable demographic personal aspects with the total practitioner sample; most practitioners within the subsample comprise females (75.7%), practitioners of white ethnicity (97.3%), of post graduate qualification (83.8%, 81.1% + 2.7%), and currently working a mean of approximately 30 hours per week.

Table 4.2: Practitioner demographics (n = 42 and n = 37)

	n = 42 All respondents				n = 37 Yoked respondents			
	n	%	M	SD	n	%	M	SD
Age			47.3	12.2			47.9	11.9
Sex								
- Male	10	23.8			9	24.3		
- Female	32	76.2			28	75.7		
Ethnicity								
- White	39	92.9			36	97.3		
- Black	2	4.8			1	2.7		
- Other	1	2.4						
Practitioner qualification								
- Graduate	2	4.8			1	2.7		
- Post Graduate	33	78.6			30	81.1		
- PhD	1	2.4			1	2.7		
Current working hours (per week)			30.2	7.9			29.9	8.0
Practitioner work-related experience (WTE bands)								
- 0 – 10 years	25	59.5			21	56.8		
- 10 – 20 years	8	19.0			8	21.6		
- Over 20 years	8	19.0			8	21.6		
History of number of work-related roles			3.9	2.2			3.9	2.2
Reasons for preferred personal treatment approach								
- Treatment strengths	17	40.5			13	35.1		
- Treatment-self match	7	16.7			7	18.9		
- Treatment-illness match	8	19.0			8	21.6		
- Unfamiliar treatment	3	7.1			3	8.1		
- Provided by a practitioner who values the approach	2	4.8			2	5.4		
- Whatever approach that is available	1	2.4			1	2.7		
Professional discipline								
- PWP	11	26.2			8	21.6		
- CBT	12	28.6			12	32.4		
- Counselling	19	45.2			17	45.9		

The practitioners predominantly have up to 10 years of work-related experience (56.8%) with a history of approximately four work-related roles. The subsample comprises fewer PWP and counsellor practitioners while it retained all CBT practitioners who provided responses on their personal aspects.

Table 4.3 provides information on the spread of key personal practitioner demographics in the yoked respondent sample (n =37) compared to the full respondent samples (n = 42). A notable observation is that practitioner groups in the yoked sample retained the similar characteristics in respect to their age and gender distributions when compared to the full sample.

Table 4.3: Practitioner spread of personal demographic characteristics between professional roles

	PWPs				CBT therapists		Counsellors			
	Yoked sample (n = 8)		Full sample (n = 11)		Full and yoked sample (n = 12)		Yoked sample (n = 17)		Full samples (n = 19)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Age	34.71	7.4	33.44	7.1	43.91	10.1	56.44	7.2	56.33	6.9
	n	%	n	%	n	%	n	%	n	%
Sex										
- Male	1	12.5	2	18.2	5	41.7	3	17.6	3	15.8
- Female	7	87.5	9	81.8	7	58.3	14	82.4	16	84.2
Ethnicity										
- White	8	100.0	10	90.9	12	100	16	94.1	17	89.5
- Black	0	-	0	-	0	-	1	5.9	2	10.5
- Other	0	-	1	9.1	0	-	0	-	0	-

Practitioners' ages ranged from 29-48 years for PWPs, 28-61 for CBT therapists and 46-72 for counsellors. A one-way independent ANOVA identified significant differences in practitioners' ages across the three groups, $F(2, 31) = 18.51$, $p < .001$. Independent samples t-tests identified statistically significant differences between PWPs and counsellors, $t(21) = -6.50$, $p < .001$, effect size r = .82, 95% CI[.61, .92]; and CBT therapists and counsellors, $t(25) = -3.76$, $p = .001$, effect size r = .60, 95% CI[.03, .80]. There was no significant difference in ages between PWPs and CBT therapists, $t(16) = -2.07$, $p = .06$, effect size r = .46, 95% CI[-.01, .76]. Findings based on the yoked sample of counsellors as significantly older than PWPs and CBT therapists are consistent with findings on the

full respondent sample. One difference however was that while age differences between PWPs and CBT therapists in the full respondent sample was significant (i.e., $p = .02$), a similar significant difference was not found between PWPs and CBT therapists in the yoked sample ($p = .06$). In relation to the spread of male and female practitioners between the practitioner groups, no significant differences were identified ($P = .36$, Fisher's exact test). Due to the lack of sufficient spread of practitioners across the different ethnic groups, it was not possible to statistically examine differences in practitioner ethnicity. Across all practitioner groups, most practitioners were of white ethnicity.

4.4.6 **Measures – Patient-completed measure**

Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., 1999)

The Patient Health Questionnaire-9 (PHQ-9) is a brief (9-item) self-report 4-point Likert-type scale measure of depression. The measure is derived from the Patient Health Questionnaire, a 3-page questionnaire containing 11 modules, one of which assesses symptoms of depression using yes-no questions (Patient Health Questionnaire, 2015). The PHQ in turn constitutes a self-administered version of the PRIME-MD, a measure designed to assist medical practitioners making criteria-informed diagnoses of DSM-IV disorders commonly experienced by medical patients (Spitzer, Kroenke, Williams, & Patient Health Questionnaire Study Group, 1999). The PHQ-9 asks respondents to rate how often they have been bothered by symptoms (of depression) as indicted by the nine items of the questionnaire, over a two-week time period prior to completing the questionnaire.

Individual item score range from 0 ("not at all") to 3 ("Nearly every day") with total PHQ-9 scores ranging from 0 to 27. The PHQ-9 contains items which correspond to each of the nine DSM-IV-TR criteria for depression (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – DSM-IV-TR, 2000) e.g. "feeling tired or having little energy" and "thoughts that you would be better off dead or of hurting yourself in some way".

Scores of 10 and above are demarcated as clinical scores and these scores showed criterion validity when assessed against mental health professional interviews (Kroenke, Spitzer, & Williams, 2001). Study II groups patients across different pre-treatment severity levels of depression – that is,

mild, moderate, moderately severe, and severe that correspond with PHQ-9 scores of 5-9, 10-14, 15-19 and 20-27 respectively. Higher PHQ-9 scores indicate a higher likelihood of a patient having major depression compared to a patient without major depression (Kroenke & Spitzer, 2002). In the current study, patients' itemised PHQ-9 ratings were scored within the routine practice service and the research examined the scored PHQ-9 pre and post treatment data.

The PHQ-9 has an internal reliability of .89 and a test-retest reliability of .84 across 48 hours. The measure can purportedly be used as a diagnostic measure and as a measure of depressive symptom severity (Kroenke & Spitzer, 2002). A meta-analysis of 14 studies validating the PHQ-9 against major depressive disorder identified a sensitivity of .8 and a specificity of .92 (Gilbody, Richards, Brealey, & Hewitt, 2007).

4.4.7 **Measures - Practitioner-completed personal aspect measures**

Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003)

The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) is a 25-item self-report 5-point Likert-type scale measure. The measure has been found to converge with scores on hardiness, life satisfaction, extraversion, conscientiousness, emotional intelligence, optimism, subjective wellbeing (Campbell-Sills, Cohan, & Stein, 2006; Karairmak, 2010; Gucciardi, et al., 2011; Ito et al., 2009; Kobasa et al., 1979; Torgalsboen, 2012; Yu & Zhang, 2007). The measure has shown divergent validity with perceived stress and stress-vulnerability (Connor & Davidson, 2003). The CD-RISC has an internal consistency of .89 for the full scale and correlations between items ranged from .3 to .7. Its test-retest reliability (intraclass correlation coefficient) is .87. The CD-RISC is measured as a unitary construct, where higher scores reflect higher levels of resilience. For a full account of the CD-RISC, see Chapter 3, Section 3.5.4.

Basic Empathy Scale for Adults (BES-A; Carré, D'Ambrosio, Bensalah & Besche, 2013; Jolliffe & Farrington, 2006)

The Basic Empathy Scale for Adults (BES-A) is a 19-item self-report 5-point Likert-type scale measure of empathy using a 3-factor model (Carré, D'Ambrosio, Bensalah, & Besche, 2013). The three factors comprising cognitive empathy, emotional contagion and emotional disconnection have been found to converge and diverge in expected directions with the Interpersonal Reactivity Index (Davis, 1983), an alternative measure of empathy. The 3-factor model of the BES-A revealed internal consistency alpha values of .69 for cognitive empathy, .72 for emotional contagion and .82 for emotional disconnection. Practitioner empathy is examined as a unitary construct in the current thesis in order to retain the statistical power of the analyses across the multiple practitioner personal aspects examined. Higher scores on the BES-A reflect higher levels of empathy. For a full account of the BES-A, see Chapter 3, section 3.5.4.

Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003)

The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) is a 15-item self-report 6-point Likert-type scale measure of mindfulness. The measure has been found to converge with traits on clarity and attention, internal state awareness, and physical well-being and diverge with self-reflectiveness, public self-consciousness, social anxiety, rumination and emotional disturbance. The MAAS has an internal consistency ranging from .80 to .90 and a 4-week test-retest reliability of .81. For the current study, MAAS scores are expressed as total scores rather than average score as described by the authors. Higher scores on the MAAS reflect higher levels of mindfulness. For a full account of the MAAS, see Chapter 3, Section 3.5.4.

4.4.8 **Procedure**

Practitioner personal aspect data and patient outcome data were received by the research data custodian who anonymised the data and conducted the necessary data selection process. Practitioner personal aspect responses and practitioner patient outcome data were allocated differing identity numbers by the data custodian to ensure that the datasets were not yoked during initial analysis of

each of the separate datasets. This ensured that the researcher remained unbiased by findings on practitioners' personal aspect scores or practitioners' level of effectiveness when analysing either data set. Matching practitioner identity numbers were only provided by the data custodian after the separate analyses of the two datasets had been conducted.

4.4.9 **Data Analysis**

Analysis I: To ascertain the validity of the data related to yoked practitioners

Practitioner personal aspect scores and the correlations between them were compared between the two practitioner samples (i.e., the yoked respondent sample of n = 37 against the full respondent sample of n = 42). Similar analyses were conducted on the n = 37 sub-sample as on the total respondent sample (n = 42) analysed in Study I. Results of these analyses were used to inform the creation of additional variables designed to assess whether personal aspects discriminated between more and less effective practice as a function of the relationship between the relevant practitioner personal aspects.

Analysis II: To identify personal aspects personal aspects unique to more effective practice

Patient outcome data for depression (i.e., PHQ-9 patient scores) were examined to identify practitioner effectiveness rankings based on patients who showed statistically reliable improvement in response to treatment (i.e., a reduction of at least 5 points on the PHQ-9; Kroenke & Spitzer, 2002). Jacobson and Truax (1991) summarised the concept of statistically reliable improvement as a means for underpinning the adoption of clinically relevant analyses of patient outcome data. Jacobson and Truax (1991) proposed two criteria for such procedures: reliable improvement, and clinically significant improvement. First, the concept of *reliable improvement* proposes that any change in the outcome score should exceed the measurement error associated with a given measure. Previously, no account was taken of the reliability of a given outcome measure. The purpose of devising an index of the extent of reliable change was to be able to state the point at which the pre-post therapy change score could reliably be attributed to the intervention and not measurement error. Second, the concept of *clinically significant improvement* proposes that for those patients whose pre-therapy scores lie

within the clinical population that their post-therapy scores then move to within the distribution of the non-clinical population. The cut-off point is determined by a point, conceptually, midway between the clinical and non-clinically population (although it will not be precisely midpoint due to differing parameters within each of the populations). These two concepts can be used separately or together, with the latter being defined as *reliable and clinically significant improvement* whereby a patient's post-therapy score must change by more than the reliable change index and be within the non-clinical distribution of scores.

In the context of Jacobson and Truax's (1991) operationalisations, there exist three primary patient change indexes of increasing stringency: pre-post improvement (not involving either of the criteria outlined above), reliable improvement, and reliable and clinical improvement. Only one of these was selected for the current analysis in order to retain statistical power due to subsequent pairwise comparisons between more effective and less effective practitioner groups (Field, 2011). Reliable improvement was preferred because of its moderate stringency compared to the least stringent pre-post improvement index and the more stringent reliable and clinical improvement index. The reasoning was that this criterion, statistically, accounted for measurement error and also, clinically, was more sensitive to change across all patients (i.e., it did exclude patients whose pre-therapy scores were below the clinical cut-off). By contrast, the pre-post improvement index would include any score reduction including statistically unreliable improvement (PHQ-9 change of < 5). At the other end of the continuum, the criterion of reliable and clinical improvement only takes into account patients who recover from being clinically depressed (as indicated by a pre-treatment PHQ-9 score ≥ 10 and a post-treatment PHQ-9 score of < 10; Kroenke, et al., 2001) and who show reliable improvement (i.e., PHQ-9 pre post treatment score reduction of ≥ 5). A full account of analysis across all three patient change indexes across severity levels see Appendix XII.

An aggregated practitioner-level distribution was derived for the sum of practitioners' patients reflecting the proportion of patients who showed reliable improvement for each practitioner. Practitioners ranked below the distribution's lower quartile (i.e., lower 25%) were identified and grouped as *less effective practice*. Practitioners ranked above the distribution's upper quartile (i.e.,

upper 25%) were identified and grouped as *more effective practice*. The distribution was then yoked with practitioners' scores on each personal aspect (i.e., resilience, empathy, mindfulness and combined resilience and mindfulness R+M). Comparisons of differences for each of four personal aspect variables between more and less effective practice groups were conducted using independent samples t-tests.

In addition to identifying personal aspects unique across more effective practice in treating all patients, personal aspects were examined in relation to the effective treatment of patients of different severity levels. Patients were grouped across different pre-treatment depression severity bands. These comprised mild depression (PHQ-9 scores: 5-9), moderate depression (PHQ-9 scores: 10-14), moderately severe depression (PHQ-9 scores: 15-19) and severe depression (PHQ-9 scores: 20-27; Kroenke & Spitzer, 2002). Similar to the creation of an aggregated practitioner-level distribution based on all patients, aggregated distributions were derived for practitioners' patients across different severity bands. Practitioners were similarly ranked as *less effective* and *more effective* depending on whether they were identified below a distribution's lower quartile or above the upper quartile respectively. The distributions were similarly yoked to practitioners' personal aspect scores and comparisons between the personal aspects of more effective and less effective practitioners were conducted using independent samples t-tests.

Table 4.4 provides a summary of the number of patients within each depression severity level. Note that the table does not include patients with PHQ-9 scores < 5 (such patients are categorised as having lesser than mild or no depression). Across the patient numbers, there is a trend of increasing patient numbers and proportions as patient severity increases. Practitioners each treated approximately 146 patients with a range of 24 - 536 patients. Although practitioners in the analysed dataset comprised those with a minimum outcome data of 20 patients, this number was reduced when examining patients across their initial severity levels. The wide variability of the number of patients per practitioner is indicative of data from a routine practice setting with a wide time-span of the dataset (i.e., 3 years and 5 months) containing practitioners who have been employed at the service for different durations, with different employment arrangements (i.e., part-time or full-time).

Table 4.4: Patient distribution across different patient severity levels

	Practitioners	Patients		Patients per practitioner			
	n	n	%	Mean	SD	Min	Max
Mild	37	897	16.6	24.24	21.94	2	95
Mod	37	1286	23.8	34.76	27.62	7	134
Mod Severe	37	1395	25.8	37.70	29.88	2	133
Severe	37	1402	25.9	37.89	26.23	6	114
All patients	37	5408	100.0	146.16	111.56	24	536

4.5 **Results I: Personal aspects of yoked practitioners**

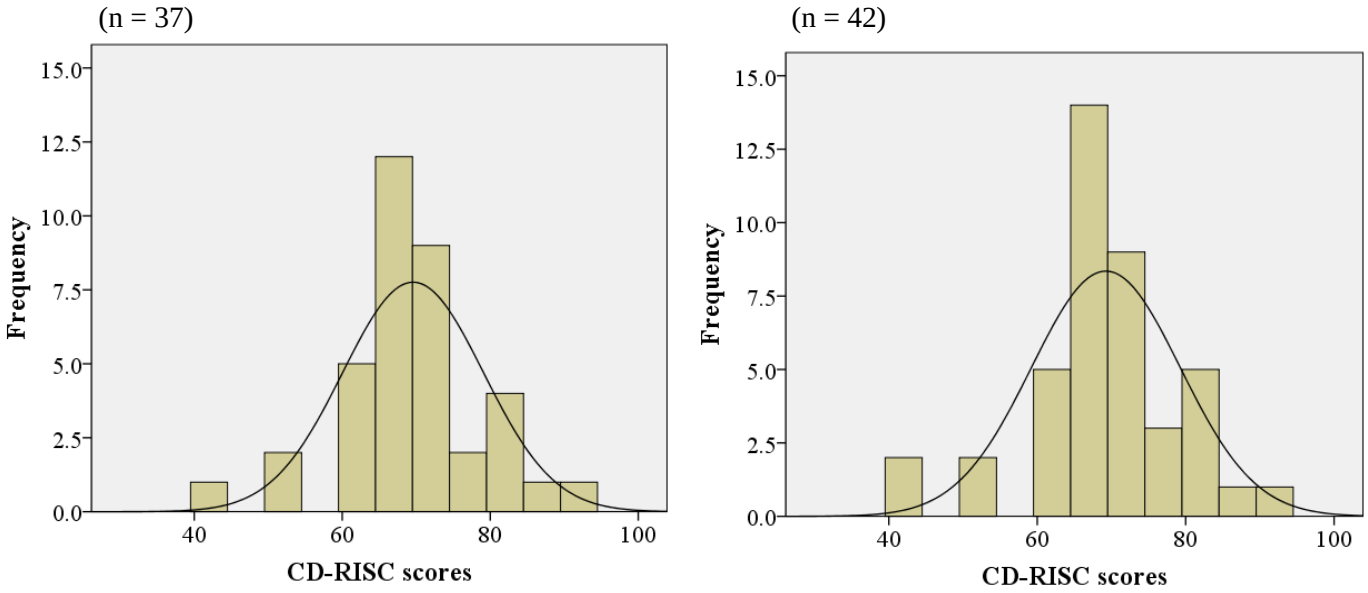
Before determining the relationship between personal aspects and effective practice, it was necessary to determine the representativeness of the yoked respondent sample (n =37) as compared with the full respondent sample (n = 42). Accordingly, this initial section focuses on this comparison. Analyses were carried out in a manner similar to those conducted in Study I in order to ascertain the psychometric properties of personal aspects in the yoked practitioner sample.

4.5.1 **Association between personal aspects**

Figure 4.1 displays histograms of practitioner personal aspect scores between the yoked respondent sample (n = 37) and the full respondent sample (n = 42). .

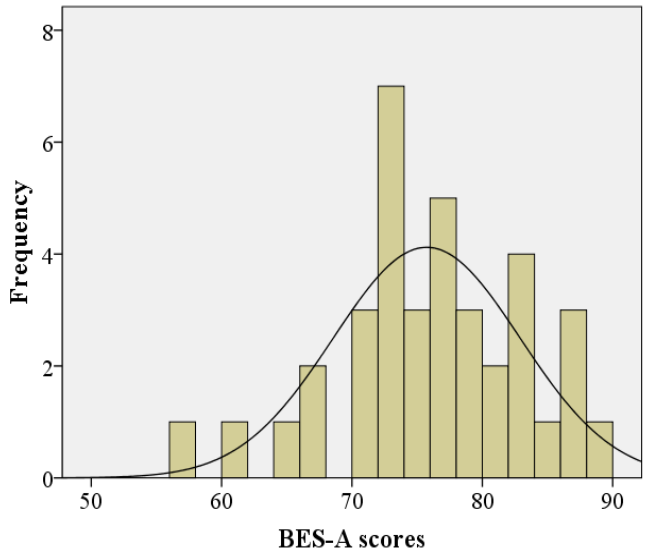
Figure 4.1: Histograms of yoked and full respondent scores on a) resilience, b) empathy, and c) mindfulness (n = 37) and (n = 42)

4.1a Resilience (CD-RISC scores)

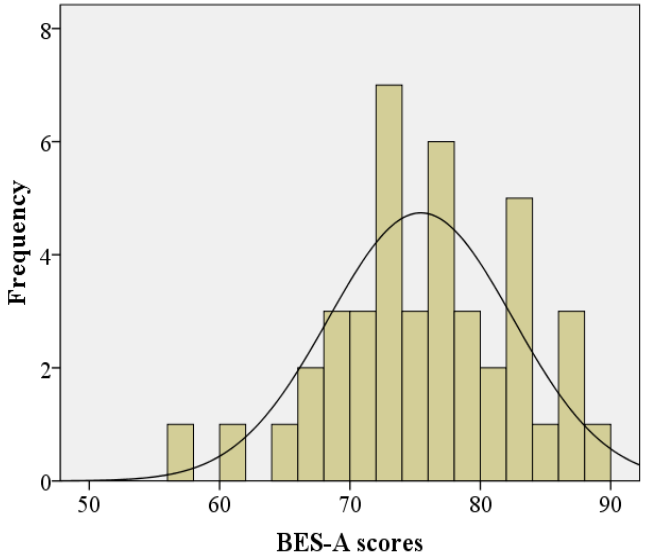


4.1b Empathy (BES-A scores)

(n = 37)

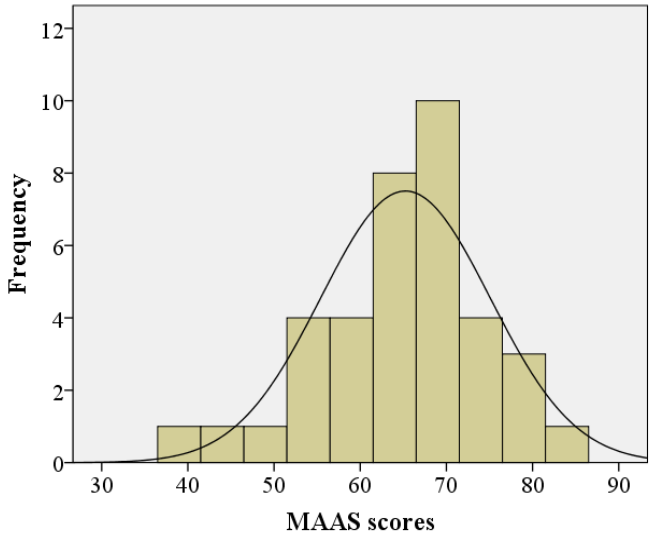


(n = 42)

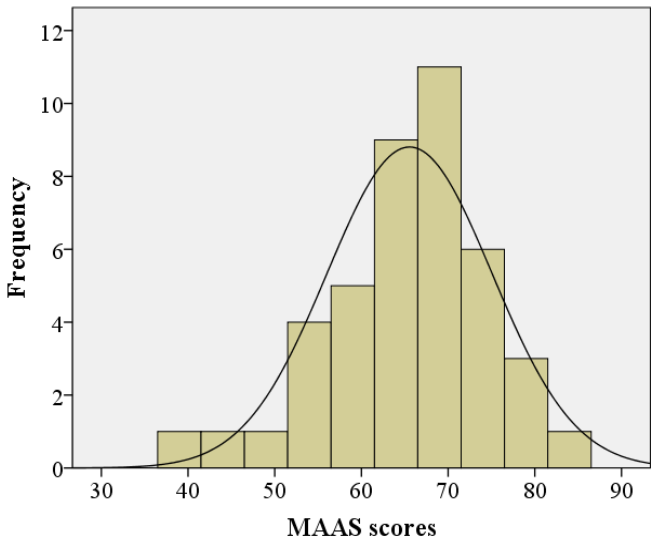


4.1c Mindfulness (MAAS scores)

(n = 37)



(n = 42)



Distributions of scores for the n = 37 practitioners on personal aspects were tested for normality based on visual examination of histograms and distributions' skewness statistic. Consistent with distributions on scores n = 42, practitioners scores were normally distributed: resilience skewness coefficient = -0.19 (SE = 0.39); empathy skewness coefficient = -0.35 (SE = 0.39); and mindfulness skewness coefficient = -0.54 (SE = 0.39). Resilience scores continued to show significant positive kurtosis; kurtosis coefficient = 1.93 (SE = 0.76) compared to empathy scores 0.32

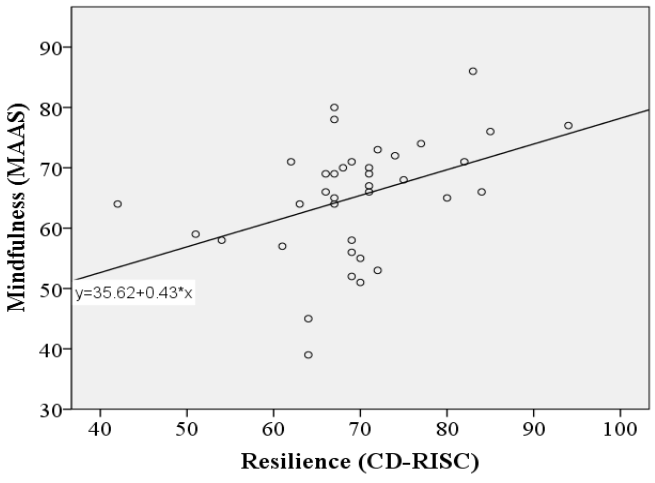
(SE = 0.76) and mindfulness scores .51 (SE = 0.76), although, the degree of kurtosis has reduced as shown by the reduced pointedness of the left compared to the right graphs in Figure 4.1a. Histograms on all practitioner personal aspect scores including empathy subscales are shown in Appendix VIII.

Figure 4.2 displays scatterplot graphs each containing a line of best fit for the different possible combination of pairs of practitioner personal aspects. Scatterplots are presented on the yoked (n = 37) and the full (n = 42) respondent samples to enable visual comparisons. Based on visual inspection the yoked sample (n = 37) was found to be consistent with the full respondent sample (n = 42). For all scatterplots across practitioner personal aspects, see Appendix IX. Pearson correlational analysis was conducted examining the relationship between resilience, empathy and mindfulness for the yoked sample of respondent practitioners. A significant positive correlation was identified between resilience and mindfulness $r = .41$, $p = .01$, 95% CI [.10, .65], consistent with the same significant association identified in the full respondent sample $r = .40$, $p = .01$, 95% CI [.11, .63]. No significant correlations were found between resilience and empathy $r = -.08$, $p = .65$ and mindfulness and empathy $r = -.01$, $p = .95$.

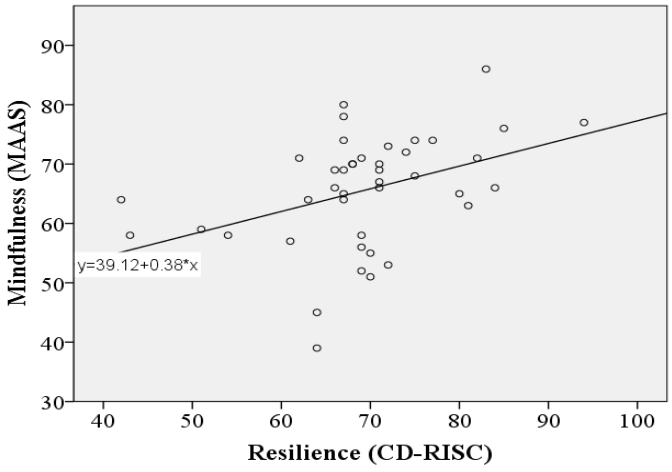
Figure 4.2: Scatterplots of combinations of yoked respondent scores on measures of resilience, empathy, and mindfulness (n = 37) and (n = 42)

4.2a Resilience by Mindfulness

(n = 37)

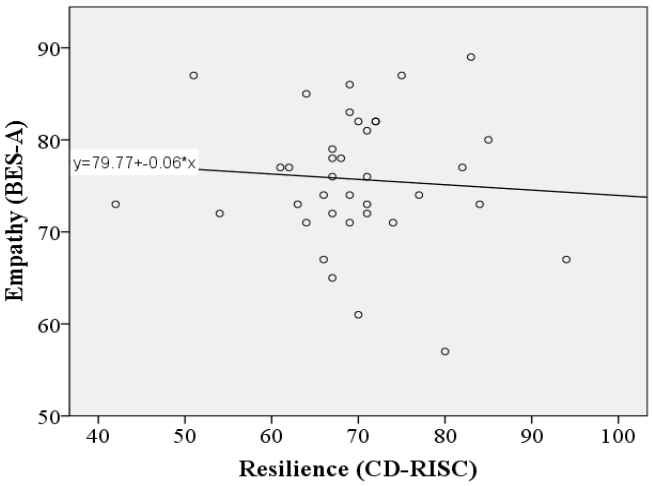


(n = 42)

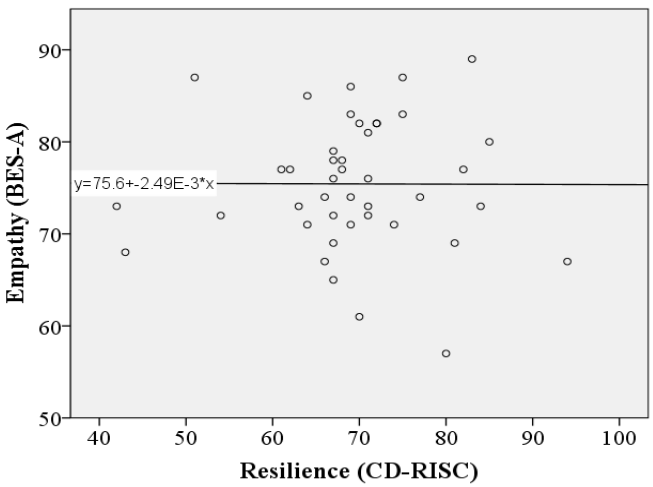


4.2b Resilience by Empathy

(n = 37)

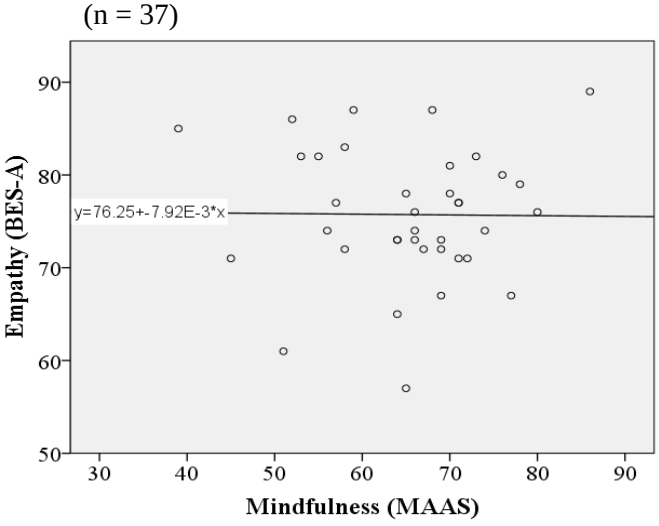


(n = 42)

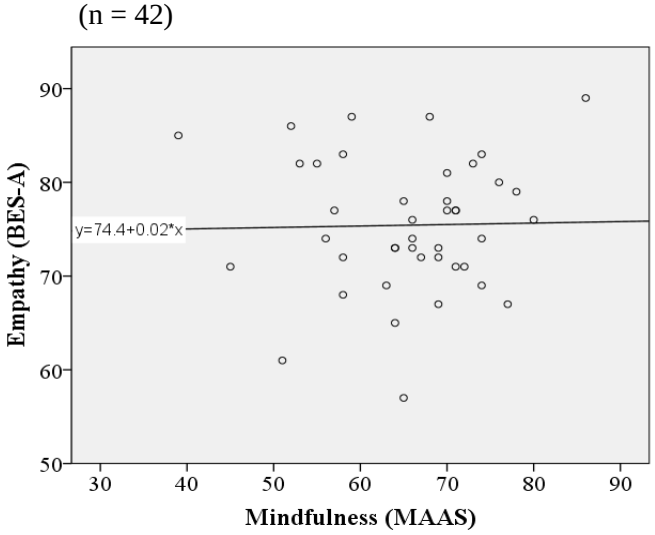


4.2c) Mindfulness by Empathy

(n = 37)



(n = 42)



Correlational analyses were conducted across each practitioner grouping comprising practitioner roles (i.e., PWPs, CBT therapists and counsellors), treatment intensity (i.e., low intensity treatment provided by PWPs and high treatment intensity provided by CBT therapists and counsellors), and theoretical association (i.e., counselling and CBT-oriented treatment approaches). There was a total of five correlational analyses (i.e., three between practitioner roles, one between treatment intensity and one between theoretical orientation).

Pearson correlational analyses conducted across practitioners' *professional roles* as PWPs (n = 8), CBT therapists (n = 12) and counsellors (n = 17) identified one statistically significant correlation between resilience and mindfulness among the yoked counsellors only $r = .61$, $p = .009$, 95% CI [.19, .85]**.** This finding was similar to that of Study 1 where a one statistically significant positive correlation was identified involving all counsellor respondents (n = 19), $r = .61$, $p = .005$, 95% CI [.22, .83]. Amongst the yoked counsellors, no significant relationship was found between resilience and empathy, $r = .18$, $p = .50$; and mindfulness and empathy, $r = .15$, $p = .57$. Correlational analysis of responses by PWPs showed no significant relationship between resilience and mindfulness, $r = .14$, $p = .75$; resilience and empathy, $r = -.18$, $p = .67$; and mindfulness and empathy, $r = -.42$, $p = .30$. Correlational analysis of CBT therapist responses yielded no significant associations between resilience and mindfulness, $r = .07$, $p = .82$; resilience and empathy, $r = -.31$, $p = .33$; and mindfulness and empathy, $r = .11$, $p = .73$.

Pearson correlational analysis between personal aspects across *treatment intensity* provided by low intensity practitioners (i.e., PWPs, n = 8) and high intensity practitioners (i.e., CBT therapists and counsellors, n = 29) found no significant relationships. Responses by low intensity practitioners showed no significant relationships between resilience and mindfulness, $r = .14$, $p = .75$; resilience and empathy, $r = -.18$, $p = .67$; mindfulness and empathy, $r = -.42$, $p = .30$. High intensity practitioner responses showed one significant association between resilience and mindfulness, $r = .41$, $p = .03$, with no significant associations between, resilience and empathy, $r = .001$, $p = .998$, and mindfulness and empathy, $r = .17$, $p = .39$. The significant positive association between resilience and mindfulness for yoked respondent high intensity practitioners (n = 29) is consistent with that of the full respondent high intensity practitioner sample (n = 31), $r = .41$, $p = .02$.

Correlational analysis of personal aspects given practitioner groups based on *theoretical orientation* comprised practitioners who provided CBT-oriented treatment (i.e., PWPs and CBT therapists, n = 20) and practitioners who provided counselling (n = 17). A significant positive relationship between resilience and mindfulness was found for counselling only, $r = .61$, $p = .009$, 95% CI [.19, .85]. No significant relationship was found between resilience and mindfulness for

CBT-oriented practice, $r = .21$, $p = .37$. Associations between the other personal aspect combinations of practitioners' theoretical orientation showed no significant findings: counselling practice resilience and empathy, $r = .18$, $p = .50$; counselling practice mindfulness and empathy, $r = .15$, $p = .57$; CBT-oriented practice resilience and empathy, $r = -.31$, $p = .19$; and CBT-oriented practice mindfulness and empathy, $r = -.17$, $p = .47$. Correlational tables are displayed in Appendix XIII.

4.5.2 **Distribution and differences between personal aspect scores**

Table 4.5 presents the mean and standard deviation values of the personal aspects across the practitioner groupings for n = 37 and n = 42. Analysis of differences for the full respondent sample (n = 42) is reported in Study I. As raw score are scale dependent, bar graphs on standardised scores are presented to enable a visual display of all personal aspects in each figure. Bold bars reflect differences found to occur at a lower probability (i.e., $p < .05$) – that is, less likely to be due to chance alone. Figures 4.3a – 4.3c display the mean and SD of personal aspect scores across all practitioner groupings for both the yoked respondent sample (n = 37) and the full respondent sample (n = 42) to enable comparisons of the two samples. Direct comparisons between the yoked sample (n = 37) and the unyoked sample (n = 5) were not conducted due to the discrepant and insufficient sample size.

A total of 12 comparisons were conducted. For each of the four personal aspect variables, a one-way independent ANOVA examined differences between the three practitioners groups (i.e., PWPs, CBT therapists, and counsellors) followed by two independent samples t-tests for comparisons between treatment intensity (i.e., low versus high intensity of treatment) and theoretical orientation (i.e., CBT-oriented versus counselling treatment).

Table 4.5: Descriptive statistics (Mean and SD) of personal aspects across practitioner grouping comparing all respondents sample data (n = 42) with all yoked respondents sample data (n = 37)

	Sample size	Resilience (R)		Empathy (E)		Mindfulness (M)		Resilience & Mindfulness (R+M)	
		M	SD	M	SD	M	SD	M	SD
PWPs									
- All respondents	11	63.27	12.82	74.91	6.67	60.36	10.94	-0.80	1.07
- Yoked respondents	8	63.13	11.37	77.25	6.36	58.63	11.80	-0.80	1.07
CBT therapists									
- All/yoked respondents	12	70.75	7.67	73.92	7.70	64.58	8.48	0.03	0.73
Counsellors									
- All respondents	19	71.74	8.50	76.68	7.03	69.16	8.06	0.37	0.91
- Yoked respondents	17	71.76	8.93	76.29	7.28	68.82	8.45	0.36	0.95
CBT & Counsellors									
- All respondents	31	71.35	8.07	75.61	7.30	67.39	8.39	0.24	0.85
- Yoked respondents	29	71.34	8.30	75.31	7.42	67.07	8.58	0.22	0.87
PWPs & CBT therapists									
- All respondents	23	67.17	10.90	74.39	7.08	62.57	9.75	-0.31	0.98
- Yoked respondents	20	67.70	9.82	75.25	7.22	62.20	10.09	-0.30	0.95
All practitioners									
- All respondents	42	69.24	10.03	75.43	7.07	65.55	9.51	0.00	1.00
- Yoked respondents	37	69.57	9.51	75.73	7.16	65.24	9.83	0.00	0.99

Comparisons between *treatment approaches* using a one-way independent AVONA identified no statistically significant differences for resilience, $F(2, 34) = 2.60$, $p = .09$; and empathy, $F(2, 34) = 0.60$, $p = .55$. Significant differences were identified for mindfulness, $F(2, 34) = 3.35$, $p = .047$; and R+M, $F(2, 34) = 4.36$, $p = .02$. The bold bars in Figure 4.3a display how the findings of the n=37 yoked respondent sample identified that differences between practitioner groups in mindfulness and

R+M as occurring less likely due to chance alone. The same finding was obtained in the full n = 42 respondent sample.

Figure 4.3: Bar graphs displaying distributions of personal aspect variables (resilience, empathy, mindfulness and combined resilience and mindfulness)

Figure 4.3a: Between PWPs, CBT therapists, and counsellors

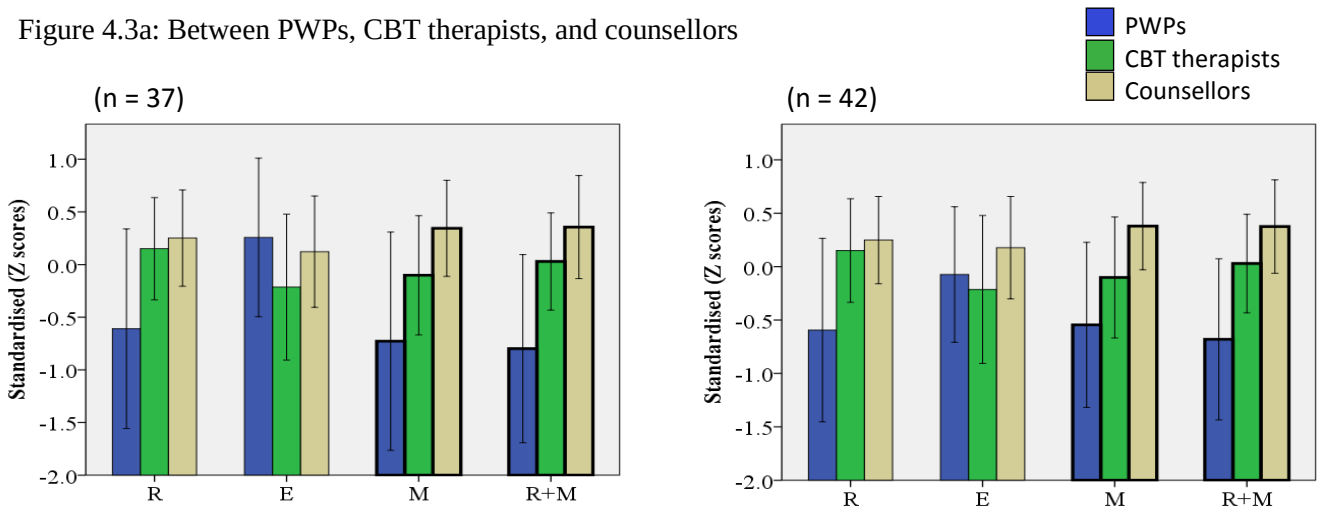


Figure 4.3b: Between practitioners who deliver low intensity (i.e., PWPs) and high intensity interventions (i.e., CBT therapists and counsellors)

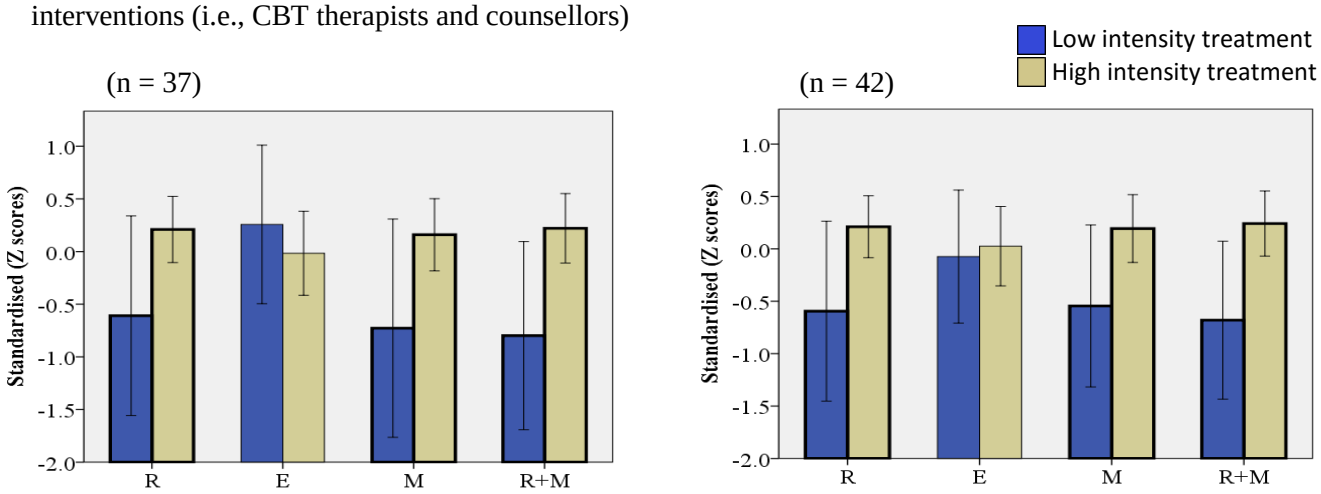
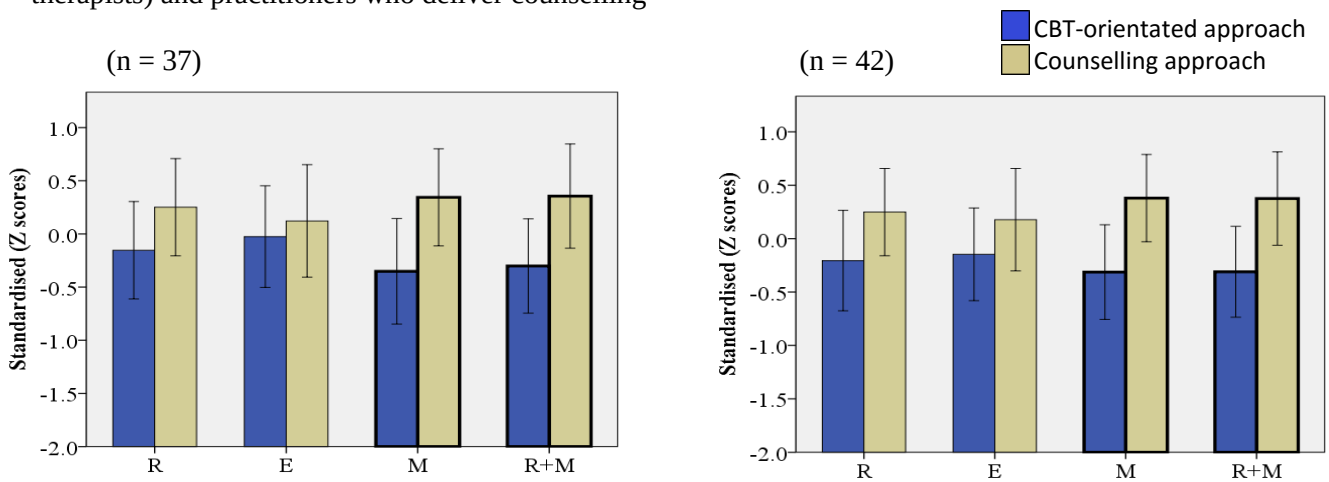


Figure 4.3 c: Between practitioners who deliver CBT-oriented intervention (i.e., PWPs and CBT therapists) and practitioners who deliver counselling



Independent samples t-tests were used to compare personal aspect scores between *treatment intensity* practitioner groups. Low intensity PWP intervention (n = 8) and high intensity CBT therapy and counselling (n = 29) did not statistically differ in empathy, t (35) = 0.67, p = .51, effect size r = .11, 95% CI[-.22, .42], however, significantly differed in resilience, t (35) = -2.29, p = .03, effect size r = .36, 95% CI[.04, .61]; mindfulness, t (35) = -2.27, p = .03, effect size r = .36, 95% CI[.04, .61]; and R+M, t (35) = -2.80, p = .01, effect size r = .43, 95% CI[.12, .66]. This finding in the yoked respondent sample (n = 37) is consistent with that of the full respondent sample (n = 42) – indicated by the bolded bars in Figure 4.3b.

In respect to practitioners' *theoretical orientation*, independent samples t-tests were conducted on personal aspect scores between practitioners of counselling orientation (n = 17) and those of CBT-orientations (i.e., PWPs and CBT therapists, n = 20). No statistically significant differences were identified on practitioners' resilience, t (35) = 1.31, p = .20, effect size r = .22, 95% CI[-.12, .51]; and empathy, t (35) = 0.44, p = .67, effect size r = .07, 95% CI[-.26, .38]. Significant differences were identified on practitioners' mindfulness, t (35) = 2.14, p = .04, effect size r = .34, 95% CI[.02, .60]; and R+M, t (35) = 2.10, p = .04, effect size r = .33, 95% CI[.01, .59]. This finding is consistent with the full respondent sample (n = 42) where significant differences were identified in personal aspects of mindfulness (p = .02), and R+M (p = .03). See Fig 4.3c.

4.5.3 **Summary of comparison between full (n = 42) and yoked (n = 37) respondent samples**

In summary, the yoked practitioner sample is representative of the full respondent sample. Practitioners in the subsample display the same characteristics, associations and group differences between practitioner personal aspects as identified in the full respondent sample. Key similarities comprised i) significant age differences between the practitioner treatment groups, ii) a significant positive association between resilience and mindfulness across all practitioners that was found to be specific amongst counsellors and iii) a consistent finding of differences beyond chance alone in mindfulness and combined resilience and mindfulness across all practitioner groupings (i.e., across practitioner treatments, treatment intensity levels and theoretical-orientation). Relatively higher levels of mindfulness and combined resilience and mindfulness were indicated amongst counsellors,

practitioners of high-intensity treatment and practitioners of counselling as compared to CBT-orientation.

4.6 **Results II: Personal aspects unique to more effective practice**

A summary of the distributions of practitioners' patient change indices is provided in Table 4.6. Measures of the central tendency (mean), dispersion (SD), and distribution (skewness) of practitioner patient-change-index scores are reported across increasing patient depression severity levels. Distributions based on 'all patients' reflect distributions based on all patients who present with mild to severe levels of depression (i.e., PHQ-9 ≥5). Given that patients have initial severity scores, PHQ-9 ≥ 5, these patients are able to demonstrate reliability improvement (indicated by a pre-post treatment score reduction of PHQ-9 ≥ 5).

Table 4.6: Practitioner distributions of patient change on the PHQ-9

PHQ-9 severity band	PHQ-9 score range	Practitioner distribution (n = 37) Proportion of patients meeting criterion of reliable improvement			
		Mean	SD	Skewness	Std Error
Mild	5-9	17.23	10.85	.67	.39
Moderate	10-14	39.25	18.31	.47	.39
Moderately Severe	15-19	39.20	15.69	-.74	.39
Severe	20-27	40.21	18.78	**1.23**	**.39****
All patients	5-27	35.82	13.01	0.41	.39

* $p < .05$
** $p < .01$

Across the respective practitioner distributions for the treatment of patients of different severity levels, it is evident that practitioners in their treatment of patients with severe depression show a significantly high positively skewed spread around the mean practitioner measure of reliable improvement, skewness = 1.23, $p < .01$. This pattern suggest that as practitioners treat more severe patients, more effective practitioners are more clearly distinguishable given that they trail further away from the distribution mean relative to other practitioners who remain closer to the distribution mean.

Table 4.7 provides findings of the independent t-test values comparing more effective and less effective practice for patient reliable improvement across all patients. More effective practice compared to less effective practice did not show significantly higher levels of resilience, t (16) = -1.70, p = .11, effect size r = .39, 95% CI[-.09, .73] or higher levels of empathy, t (16) = -0.32, p = .75, effect size r = .08, 95% CI[-.40, .53]. Mindfulness levels of more effective practice (M = 70.89, SD = 4.43) was significantly higher, t (16) = -2.56, p = .02, effect size r = .54, 95% CI[.10, .80] than mindfulness levels of less effective practice (M = 59.78, SD = 12.24). A significant difference was also identified in relation to R+M, where more effective practice showed a significantly t (16) = -2.83, p = .01, effect size r = .58, 95% CI[.15, .82] higher mean value for the combined Resilience and Mindfulness variable (M = 0.75, SD = 1.03) in contrast to the combined personal aspect mean value for less effective practice (M = -1.19, SD = 1.77).

Table 4.7: T-test result comparing practitioner personal aspects between more effective and less effective practice groups for all patients

	Group Sample Size		Proportion of patients with reliable improvement Yoked practitioner respondents (n = 37) (t-test values)			
	More effective (Upper Quartile)	Less effective (Lower Quartile)	R	E	M	R + M
All patients (PHQ ≥5)	9	9	-1.70	-0.32	**-2.56***	**-2.83***

R = Resilience; E = Empathy; M = Mindfulness; R + M = Resilience + Mindfulness
* p < .05

In summary, when providing treatment to patients of all severity levels, practitioners who facilitated better patient outcomes compared to those who facilitated relatively poorer patient outcomes showed a significantly higher level of mindfulness, and combined resilience and mindfulness. In contrast there was no evidence of significant differences between practitioners' levels of resilience and empathy.

Table 4.8 presents findings from subsequent analysis of practitioner effectiveness across the varying patient severity levels. Comparisons for the four personal aspect variables were conducted for the treatment of patients across four severity levels, giving a total of 16 comparisons.

When providing treatment to *patients with mild depression*, independent samples t-tests found that more effective practice compared to less effective practice did not show significant differences across all personal aspects: resilience, t (16) = -1.88, p = .08, effect size r = .43, 95% CI[-.05, .74]; empathy, t (16) = 0.65, p = .53, effect size r = .16, 95% CI[-.33, .58]; mindfulness, t (16) = -1.70, p = .11, effect size r = .39, 95% CI[-.09, .73], with the exception of R+M, t (16) = -2.17, p = .045, effect size r = .48, 95% CI[.01, .77]. More effective practitioners showed significantly higher levels of R+M (M = 1.06, SD = 1.26), compared to less effective practitioners (M = -.52, SD = 1.78). In respect to the treatment of *patients with moderate depression*, independent samples t-tests identified no evidence of significant differences between more effective and less effective practice on all personal aspect variables: resilience, t (16) = -1.55, p = .14, effect size r = .36, 95% CI[-.12, .71]; empathy, t (16) = 1.64, p = .12, effect size r = .38, 95% CI[-.11, .72]; mindfulness, t (16) = -0.78, p = .45, effect size r = .19, 95% CI[-.30, .61]; and R+M, t (16) = -1.39, p = .19, effect size r = .33, 95% CI[-.16, .69].

Practitioners when treating *patients with moderately severe depression* showed no significant differences when comparing between more effective and less effective practice were identified across resilience, t (16) = -1.52, p = .15, effect size r = .35, 95% CI[-.13, .71]; and empathy: , t (16) = -0.75, p = .47, effect size r = .18, 95% CI[-.31, .60]. Significant differences were identified across practitioners' mindfulness, t (16) = -2.19, p = .04, effect size r = .48, 95% CI[.02, .77]; and R+M, t (16) = -2.39, p = .03, effect size r = .51, 95% CI[.06, .79]. More effective practitioners displayed significantly higher levels of mindfulness (M = 70.56, SD = 8.28) compared to less effective practitioners (M = 59.78, SD = 12.24). Similarly, more effective practitioners displayed significantly higher levels of combined resilience and mindfulness (M = .64, SD = 1.46) compared to that of less effective practitioners (M = -1.19, SD = 1.77).

Similar to findings across the treatment of patients with moderately severe depression, independent samples t-test yielded significant differences in mindfulness as well as combined

resilience and mindfulness for the treatment of *severely depressed patients*. Mindfulness levels of more effective practice however was significantly higher, t (16) = -4.29, p = .001, effect size r = .73, 95% CI[.40, .89], with a mean value of 73.67 (SD = 5.57) compared to mindfulness levels of less effective practice (M = 57.56, SD = 9.80). In a similar manner, R+M levels of more effective practice was significantly higher, t (16) = -3.83, p = .001, effect size r = .69, 95% CI[.33, .88], (M = 1.22, SD = 1.26) compared to R+M levels of less effective practice (M = -1.36, SD = 1.58). More effective practice compared to less effective practice did not show significantly higher levels of resilience, t (16) = -1.90, p = .08, effect size r = .43, 95% CI[-.05, .75], or higher levels of empathy, t (16) = -0.72, p = .48, effect size r = .18, 95% CI[-.32, .60].

Table 4.8: T-test results comparing practitioner personal aspects between more and less effective practice groups across varying patient severity levels

	Group Sample Size		Proportion of patients with reliable improvement Yoked practitioner respondents (n = 37) (t-test values)			
	More effective (Upper Quartile)	Less effective (Lower Quartile)	R	E	M	R + M
Mild	9	9	-1.89	0.65	-1.70	**-2.17***
Moderate	9	9	-1.55	1.64	-0.78	-1.39
Moderately Severe	9	9	-1.52	-0.75	**-2.19***	**-2.39***
Severe	9	9	-1.90	-0.72	**-4.29***	**-3.83***

R = Resilience; E = Empathy; M = Mindfulness; R + M = Resilience + Mindfulness
* p < .05

It is notable that the probability of significant differences in practitioners' M and R+M occurring by chance in the general population reduces as patient severity increases with the exception of R+M for the treatment of patients with mild depression. This is indicated by the increasing absolute t-values as patient severity increases except for R+M when seeing patients with mild depression.

4.7 **Discussion**

Study II set out to achieve two aims. First, to test whether the subsample of respondents who yielded yoked data (n = 37) – and hence analysed through the remainder of the work reported in this thesis – was representative of the full respondent sample (n = 42). Second, to identify personal

aspects unique to more effective practice using single level data analysis. Related to the first aim, the yoked subsample of respondent practitioners was found to be representative of the full respondent sample (examined in Study I). The subsample comprised practitioners who shared the same demographic characteristics and who displayed systematic differences primarily in resilience, mindfulness and combined resilience and mindfulness. Across both samples, relatively higher levels of resilience were indicated amongst high intensity compared to low intensity practitioners. Mindfulness and combined resilience and mindfulness were indicated amongst practitioners of counselling orientation and high intensity practitioners. Further discussion on these findings is presented in Study I (Discussion Section 3.7).

Following from the second aim of Study II, mindfulness and combined resilience and mindfulness were identified as personal aspects unique to more effective compared to less effective practice. Mindfulness was found to be significant when treating all patients, and patients with relatively more severe depression. Findings indicated that as patient severity increased, the significance of mindfulness as a personal aspect unique to more effective practice increased. In other words, as patients' severity in depression increases, it may be valuable that practitioners who work with these patients increasingly utilise mindfulness.

Considering how mindfulness may operate in facilitating more effective reduction in patient outcome scores, it would appear that patients who are more severely depressed find it therapeutic receiving treatment from a practitioner who is able to remain in the present moment with them. Patients with severe depression may experience a more pervasive sense of social isolation across different domains of their lives (e.g., amongst friends, family, general community) and also may hold more established perceptions of being socially isolated (Hawthorne, 2008). Perhaps personal experiences of a practitioner as being present, helps severely depressed patients feel connected with another person and contributes in reducing their perceived social isolation.

R+M was found to be at statistically higher levels in practitioners who provided more effective treatment to all depressed patients, mildly depressed, and patients with relatively more severe depression. The findings suggest that R+M may have broader applications to patient

treatment. Similar to mindfulness, the significance of R+M was indicated to increase as patient severity increased. Combined resilience and mindfulness uniquely differed between more and less effective practitioners in their treatment of patients with mild depression. It is worth considering that the patient sample treated comprised patients who presented with symptoms of depression and anxiety. It is likely that while patients presented with mild symptoms of depression they may have been accepted to receive treatment in context of clinical judgement on their "caseness" or may have presented with more severe symptoms of anxiety. If a patient presented with co-morbid depression and anxiety, perhaps improvement in mild depression may have occurred in context of improvement of more severe levels of anxiety. Another argument could possibly be that patients with mild depression, present with low PHQ-9 scores of 5-9. Because their pre-treatment depression is low, there is a lesser scope for score reduction. Patients with a mild depression score of 5 have to show a score reduction of 5 suggestive of full recovery in order to display reliable improvement.

In respect to how resilience and mindfulness may operate to facilitate better patient outcomes, it may be useful to draw on findings from Study II that have shown that both aspects display a significant positive correlation. This suggests that the personal aspects of resilience and mindfulness operate in a complimentary manner. Resilience relates to a personal drive, hardiness, perseverance or commitment to patients: possible correlates of behaviour or of taking action. In contrast, mindfulness relates to a quality of consciousness or state of being in the present. Perhaps practitioners with higher levels of the combined personal aspects display a commitment or perseverance when working with patients while being informed (i.e., attentive and aware) of what is occurring in the present moment while with patients. It could be argued that unique to this combination, in contrast to responding to patients in the absence of being mindful, practitioners could alternatively respond to patients following their personal inclinations and goals, which while often may be in line with patients, at times may differ if practitioners are influenced by implicit biases, personal interests or their own affective states (e.g., anxiety). An interpretation drawn from this finding is that resilience applied with mindfulness may enable more timely congruent responses to patients' presentations, thereby possibly facilitating relatively more patient improvement.

In relation to the methodology applied in Study II, traditional benchmarking procedures were used to identify more and less effective practice. These procedures were applied on practitioner effectiveness distributions created while aggregating patient outcome scores (i.e., in Study II using practitioners' proportions of patients who showed statistically reliable improvement). Skewed distributions showed that more effective practitioners were more easily identifiable when effectiveness was based on the treatment of more severely depressed patients. This observation makes intuitive sense as patient outcomes are likely to reflect practitioners' effectiveness when practitioners are sufficiently challenged to work with patients with more severe/complex psychological presentations. This observation is of particular relevance in respect to traditional benchmarking of practitioners which is not sensitive to irregular score distribution. Practitioners are likely to be grouped as more or less effective practice based primarily on an arbitrary rank position in distributions rather than the extent of their variability.

Researchers using benchmarking procedures, may assume that all practitioner distributions, present with more effective, effective and less effective practitioners, irrespective of whether the distribution is reflective of a service comprising primarily more effective practitioners within the population of practitioners. In addition to this assumption, a possible risk associated with benchmarking practitioners against themselves within a routine practice setting, is that it may encourage a competitive environment. Practitioners may strive to maintain their bread and butter, experiencing anxiety over the prospect of working with patients where their displayed effectiveness may be adversely affected (for example while working with challenging patients). The application of benchmarking procedures necessitates careful analysis and a routine practice culture that, while abiding to ethical standards of practice, is also supportive of practitioners' professional training and development needs.

The current study highlights the limitation associated with patient sample sizes. Practitioner ranking of effectiveness based on practitioners with as few as two patients with mild depression or moderately severe depression (as indicated in the current data set) would reasonably raise questions on the validity of findings within the respective patient severity levels. Findings however display a

consistency across the treatment of different patient severity levels suggesting that practitioners with higher levels of mindfulness and combined resilience and mindfulness uniquely contribute towards patient improvement.

5 Chapter 5

Study III: Aspects unique to more effective practice:

Multilevel modelling

5.1 Introduction

The research reported in this chapter – Study III – sets out to identify more and less effective routine practice and for the findings to be generalizable to practitioners in the population. It uses non-aggregated patient outcome data within a hierarchical structure and controls for potential confounding patient variables. A primary issue with hierarchical data concerns dependencies of observations. For example within a naturally-occurring educational structure, the grades of a student are likely to be influenced by the teacher and the school in which the student is enrolled. If analysed via traditional single level data analysis, this would violate the assumption of independence of observations and could generate false positive findings or Type 1 errors. Identified differences could be due to small standard error estimates, which are more influenced by dependencies inherent in data than the representative spread of data drawn from random samples (Hox, 2010). In addition, single level data analysis is unable to control for variations at different levels of the hierarchical structure (Rasbash, Steele, Browne, & Goldstein, 2009). The following sections set out to provide: i) an overview of how multilevel modelling addresses dependencies of observation, ii) how MLM generates more precise population-based estimates of the practitioner residuals that are used to identify more and less effective practice, and iii) methodological considerations when using MLM.

5.2 Multilevel modelling and dependencies of observations

Multilevel modelling (MLM) measures dependencies of observations, thereby allowing the identification of systematic differences between clusters of data in a study. In the current study, the variance of patient outcome attributable to different practitioners is ascertained and so the analysis enables the identification of more and less effective practice. The degree of dependence of observations is measured as a correlation coefficient. This is more commonly termed the intra-class correlation coefficient ICC and represents the *therapist effect* applicable to Study III. The ICC

represents the total variance in outcome that is attributable to the classes in a study (Field, 2009; Twisk, 2006). In the current study, total variance consists of variance between practitioners (σ^2_{u0}) and within practitioners (σ^2_e). A high ICC indicates a large proportion of variance between practitioners and similarly indicates a small proportion of variance within practitioners (i.e., across practitioners' patients). Two meta-analyses and one review study have sought to provide concise summaries of therapist effects. The number of studies (*k*) included in these and the reported average random therapist effects are as follows: Crits-Christoph, Baranackie, Kurcias and Beck (1991), *k* = 15, therapist effect = 8.6%; Crits-Christoph and Mintz (1991), *k* = 10, therapist effect = 4.3%; and Baldwin and Imel (2013), *k* = 46, therapist effect = 5%. Study III provides therapist effect coefficients unique to a heterogeneous sample of practitioners who vary across the type (i.e., self-help interventions, CBT therapy, and counselling), intensity (i.e., low and high intensity), and theoretical orientations (i.e., CBT-oriented and counselling-oriented) of treatment provided.

5.3 **Multilevel modelling and residual estimates**

MLM is a complex form of regression analysis that is able to partition residuals (*r*) at higher levels of the related multi-level model. This is in contrast to a single (level 1) raw residual (r_{ij}) or error coefficient (σ_e) obtained using standard single-level regression analysis. The raw residual for each predicted patient outcome scores is $r_{ij} = y_{ij} - \hat{y}_{ij}$, where y_{ij} is the observed outcome score for the *i*th patient of the *j*th practitioner, and $\hat{y}_{ij}$ is the predicted outcome from the regression using all patient scores. The raw residual for each practitioner (r_j) is the mean of r_{ij} i.e., residual outcome scores of patients treated by the *j*th practitioner. In the current study, practitioner level (i.e., level 2) residuals are generated. These reflect the degree to which practitioners' individual regression lines vary from the overall predicted patient outcome (i.e., practitioners' overall mean regression line).

MLM assumes that higher level units belong to a population distribution of units that is known (estimated) and that is used to predict residual estimates. Unlike estimation in single level regression, estimates in MLM are derived using a 'shrinkage factor' or empirical Bayes estimation (Goldstein, 2011; Hox 2010).

Estimated level 2 (practitioner) residual = Shrinkage factor x r_j

$$= \frac{\sigma_\mu^2}{(\sigma_\mu^2 + \sigma_e^2/n_j)} \quad \text{x} \quad r_j$$

Level 2 (practitioner) variance is reflected by σ_μ^2, while σ_e reflects level 1 (patient or error) variance. Notably, the shrinkage factor is always ≤ 1, resulting with an estimated residual that is ≤ the magnitude of the raw level 2 residual. More shrinkage is seen to occur in instances where there are fewer patients seen by a practitioner (i.e., small n_j), or where patient variance is large (i.e., large σ_e^2), or where practitioner variance is small (i.e., small σ_μ^2). Data alone may provide an imprecise indication of where the respective practitioner regression line would lie. The shrinkage factor adjusts possible estimation errors associated with small sample sizes and irregular patient and practitioner variance by using information based on the variance of all practitioners (i.e., a more precise practitioner variance to predict where a practitioner's regression line may lie).

In addition to deriving relatively more precise residual point estimates, MLM also provides confidence intervals for each practitioner residual estimate, shown as error bars. These test whether estimates differ significantly from the overall mean. Graphing of residuals yields a 'caterpillar plot' (Rasbash et al., 2009). In Study III, each practitioner residual bar reflects how a practitioner's predicted range of post-treatment depression scores differs from the overall mean post-treatment depression scores. Practitioners whose residual scores are in the middle of the caterpillar plot, with confidence intervals that cross the overall mean, indicate they are providing effective practice. At either end of the plot are practitioners whose residual scores are significantly lower or higher than the overall mean. These indicate practitioners whose patients showed considerably better improvement (i.e., more effective practice) or lesser improvement (i.e., less effective practice) respectively.

The shrinkage factor illustrates how MLM is able to be flexible and responsive in its application to a naturally complex routine practice data characterised by varying patient sample sizes as a function of practitioners being employed at different intervals of time and with different work contracts. Values derived purely from the raw data could result in estimates lacking in precision.

Using MLM, findings would be generalizable to the population of practitioners, beyond the participating sample of practitioners.

5.4 **Methodological considerations**

5.4.1 **Sample size**

In MLM, data sets are assumed to produce results based on large sample sizes. A consistent problem identified across reviews concerns inadequacy of sample sizes (Baldwin & Imel, 2013; Crits-Christoph et al., 1991; Crits-Christoph & Mintz, 1991). In contrast to single level data analysis, MLM necessitates representative samples at the various levels of analysis. Rasbash (2008) advises researchers to be aware of their 'target of inference': whether inferences are to be made on individuals in their own right or inferences in relation to a larger population. For example, if interested in a specific practitioner, more patient data would be necessary for that practitioner. If interested in a sample of practitioners, a larger practitioner sample would enable more precise and reliable estimates. Authors have provided rule-of-thumb estimates depending on whether researchers are interested in examining random estimates (i.e., practitioner and patient variance values) or fixed estimates (i.e., explanatory variable model parameters). Hox (2010) cited Kreft's (1996) 30/30 rule translating to a study with n= 30 practitioners with n = 30 patients per practitioner - if interest is mostly in fixed parameter estimates. Furthermore, the following suggestions were made: n = 50 patients with n = 20 patients per practitioner for cross-level interaction studies and n = 100 patients with n = 10 patients per practitioner for random effects studies. In general, it is recommended to increase the number of therapists as this brings more benefits than increasing the number of patients per practitioner (Heck & Thomas, 2009; Hox, 2010; Snijders, 2005). Baldwin and Imel's (2013) meta-analysis of therapist effect studies contained details of sample sizes of studies examined. Out of the 46 studies that treated therapists as a random sample, the studies that at least aspired to meet sample size recommendations were those that involved inpatient or managed care settings. Dinger, Strack, Liechsenring, Welmers, and Schauerburg (2008) satisfied the 30/30 recommendation with 50 therapists and an average of 51.1 clients per therapist from an inpatient psychiatric facility. Wampold and Brown (2005) most closely met the 100/10 recommendation with a 581/9.68 sample combination while investigating patients in

managed care. In addition, Saxon and Barkham (2012) met the 30/30 sample size recommendation with a sample of 119 practitioners each with 30 or more patients from outpatient routine primary care services. A more recent empirical examination of a large naturalistic data containing 1,800 therapists and 48,648 patients (Schiefele et al., in preparation), generated combinations of recommended practitioner and patient sample sizes. Using this guide, only a few studies have met recommended sample sizes to date (Dinger et al., 2008; Lutz et al., 2007; Okiishi et al., 2003; Saxon & Barkham, 2012; Wampold & Brown, 2005).

5.4.2 **Fitting a multilevel structure**

Naturally occurring observations may reflect multilevel structures. These structures may differ from research multilevel structures necessary to enable examination of specific research questions. These include relatively simple hierarchical structures (for example, where level 1 units nest in only one level 2 unit; see Figure 5.1a) and non-hierarchical structures (for example a cross-classified and multiple membership structures where level 1 units can be nested differentially to level 2 units; see Figure 5.1b; Rasbash, 2008).

In routine practice within mental health services, patients may be in need of treatment for short-term acute presentations or multiple periods of care requiring occasions of assessment and intervention by different practitioners at different times. Figure 5.1b depicts a possible naturally occurring multilevel structure where patients are cross-classified across practitioners with repeated measures (Rasbash, 2008). From Figure 5.1b, an example is seen for patient 1 (P1) who is seen by practitioner 1 (PT1) on the first two occasions and practitioner 2 (PT2) on occasions 3 and 4. Analysis following this design could examine patient change over the course of time when treated by multiple practitioners and is limited in examining systematic differences between practitioners. A multilevel structure that would enable the examination of systematic differences between practitioners would consist of a hierarchical structure where each patient is nested with only one practitioner (as shown in Figure 5.1a).

Figure 5.1a: Unit diagram of a two-level hierarchical structure depicting a model demarcating practitioners by the unique patients each sees

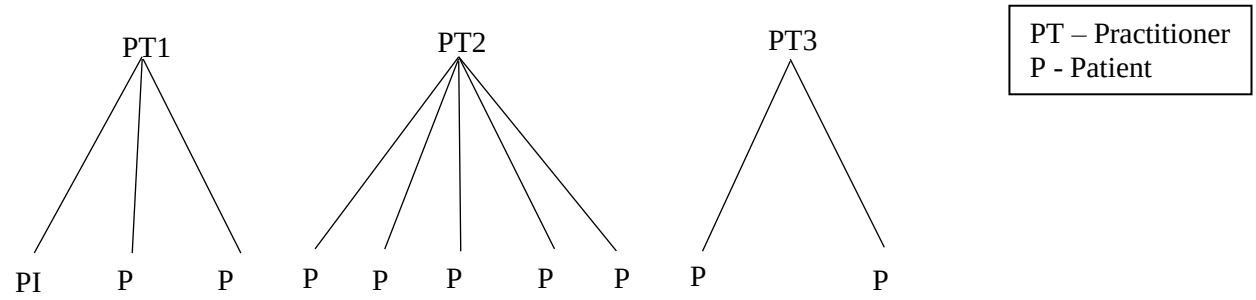
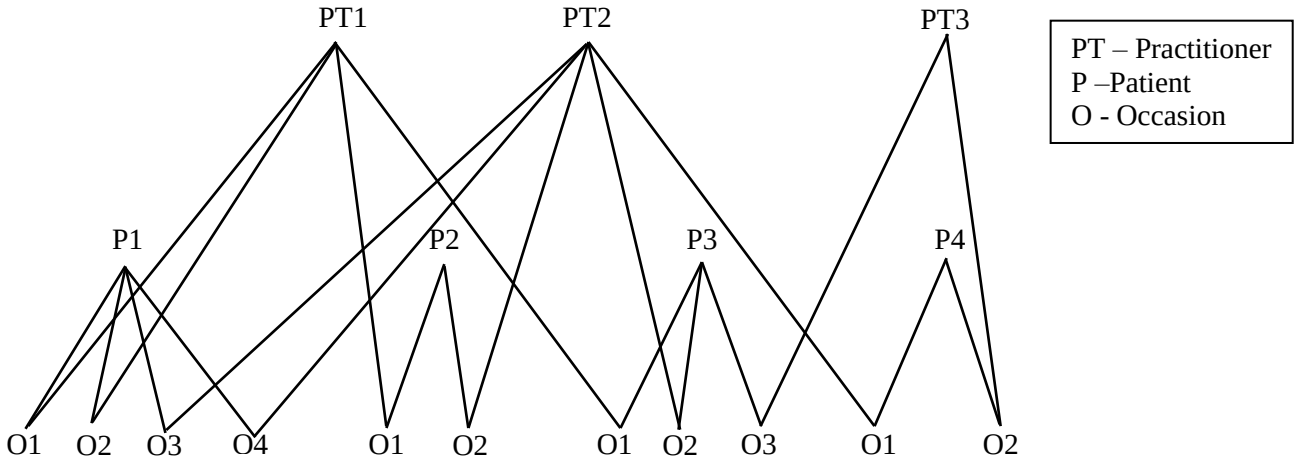


Figure 5.1b: Unit diagram of repeated measure cross-classification multilevel structure depicting an example of a possible structure of treatment provided in a community health service



Applying the structures described above to the current study, raw patient data were classified into 'care periods' where each patient received one or more 'episode of care'. Occasionally, the practitioners delivering the interventions differed between and/or within episodes of care. A large number of patients, however, received individual treatment from only one practitioner. The final dataset analysed included only these patients.

5.4.3 **Multilevel modelling analysis (model development)**

The construction of a standard single level multiple regression model can be achieved using a range of approaches (Field, 2011). These include ordered insertion of explanatory/predictor variables at the discretion of the researcher (hierarchical regression), insertion of all selected variables (forced entry), or stepwise regression (i.e., forward or backward). Multilevel regression is, however, more

complicated in relation to decisions required by the researcher, as models are developed across stages where many of variables can be tested. Each stage of model development requires model exploration of a potentially large number of parameters, including interaction effects (within a specific level and/or cross-level; Hox, 2010). Decisions to remove a variable due to a non-significant parameter early in the model development may need to be revisited if the respective parameter estimate (when retained in the model) becomes significant on insertion of another variable at a later stage of model development. Using a large number of parameters results in numerous possible permutations and combinations of variables to be included in the final multilevel model.

In addition, each parameter can be examined as fixed or random coefficients and tested as to whether they are best measured as a polynomial function (e.g., quadratic functions). Researchers also may make decisions in relation to which estimation procedure is best to utilise. Such procedures vary model findings and assist situations where running a model takes a longer computation time or where there are convergence problems. Estimation procedures include Iterative Generalised Least Square (IGLS), Restricted Iterative Generalised Least Squares (RIGLS), and Bayesian estimation using Markov Chain Monte Carlo (MCMC).

Hox (2010) described two primary strategies for model development: top-down or bottom-up. The latter approach is recommended to avoid analysis of large complicated models entailing longer computation time and convergence problems. Attention is first given to inspection of parameters and their standard errors (to test each parameter significance level) while the following steps involve constructing a null model. This is followed by the inclusion of lower-level (level-1) explanatory variables and then the inclusion of higher-level (level-2) explanatory variables, examination of explanatory variable slopes, and cross-level interactions.

In summary, Study III applies multilevel modelling analysis to a naturally-occurring hierarchical data set where patients are nested within practitioners (as depicted in Figure 5.1a). The analysis will enable the prediction of residual estimates of patient outcome scores for each practitioner participant within the context of a general population of practitioners. As such, findings on practitioners identified as more effective or less effective are therefore generalizable to practitioners

beyond the sample of the current thesis. Having identified practitioners who are more effective and less effective, the study then aims to identify the personal aspects unique to the more effective practice.

5.5 **Method**

5.5.1 **Design**

Study III examines the same subsample of data analysed in Study II (Chapter 4). It similarly aims to identify personal aspects that differentiate between more and less effective practice. In contrast to Study II, the current study however analyses systematic differences in practitioner effectiveness using practitioners' raw patient data rather than aggregated patient data. In addition, using MLM enables control of some of the patient variability inherent to practitioners' patient case-mix (e.g., patient age, sex, level of pre-treatment functioning; level 1 variables). This further enables the identification of each practitioner's personal aspect contribution towards patient outcome.

5.5.2 **Participants**

Patient outcome data comprised routine practice data of practitioners (i.e., psychological wellbeing practitioners PWPs, cognitive behavioural therapists and counsellors) employed by an IAPT service in England using a stepped care model of service delivery. Further descriptions of the IAPT setting and stepped-care model approach are provided in Chapter 4 (Section 4.4.2). Data from the same subsample of yoked respondent practitioners (n = 37) and patients (n = 5,408) as analysed in Chapter 4 are analysed in Study III. On average, patients presented with moderate levels of depression and anxiety: mean pre-therapy scores for depression and anxiety were 14.5 (SD = 6.5) and 12.7 (SD = 5.4) respectively. The number of sessions received by patients ranged from 1 – 33, with a modal number of 1 session provided to 1,848 patients (34.2%) and a mean of 4 sessions (SD = 4.1). Patient demographics indicate that many patients were female (67.0%), of white ethnicity (89.8%), aged between 30 and 49 (47.4%) and not unemployed (i.e., employed full-time or part-time, full-time homemaker, student or retired; 71.2%). The volume of patients seen by practitioners varied between high and low intensity practitioners. Each CBT therapists and counsellors, treated an approximate

average of 108 and 103 patients respectively, while PWPs treated on average, over double the number of patients (i.e., 295 patients).

In relation to practitioner sample (n =37), there were 21.6% PWPs (8 out of 37), 32.4% CBT therapists (12 out of 37) and 45.9% counsellors (17 out of 37). The mean age of practitioners differed systematically with counsellors being older (M = 56.44, SD = 7.2) than PWPs (M = 34.71, SD = 7.4) and CBT therapists (M = 43.91, SD = 10.1). Practitioners primarily comprised of females (75.7%), of white ethnicity (97.3%), of post graduate qualification (83.8%), currently working a mean of approximately 30 hours per week, predominantly having up to 10 years of work-related experience (56.8%) and with a history of approximately four work-related roles. All practitioners were trained and received regular clinical supervision consistent with their treatment approach. (See Study III Section 4.4.5 for further details). Across the full IAPT dataset sample of practitioners of 137, the sample of 37 practitioners comprised five practitioners (13%) who were less effective, 17 (46%) effective practitioners and 14 (38%) more effective practitioners. A figure of the related multilevel model is displayed in Appendix XIV.

5.5.3 **Measures**

Patient-completed measures

Patient Health Questionnaire-9 (PHQ-9; Spitzer, Kroenke & Williams, 1999)

The Patient Health Questionnaire-9 (PHQ-9) is a brief self-report 4-point Likert-type scale measure of depression. The measure has shown validity with constructs that include mental health, general health perceptions, social functioning and role functioning using the Short-Form General Health Survey (Kroenke, et al., 2001). A valid measure of major depressive disorder, the PHQ-9 has a sensitivity of .8 and a specificity of .9 (Gilbody, Richards, Brealey, & Hewitt, 2007). The measure has an internal reliability of .89 and a test-retest reliability of .84 across 48 hours. (For a full account of the PHQ-9, see Chapter 4, section 4.4.6).

Work and Social Adjustment Scale (WSAS: Marks, 1986; Mundt, Marks, Shear, & Greist, 2002):

The Work and Social Adjustment Scale (WSAS) is a 5-item self-report measure of functional impairment attributable to an identified psychological disorder. The five items are similarly worded and vary across five specific domains of functioning: work, home management, social leisure activities, private leisure activities, and relationships with others. Examples of these include:

- "Because of my (disorder), my ability to work is impaired. 0 means not at all impaired and 8 means very severely impaired to the point that I can't work";
- "Because of my (disorder), my home management (cleaning, tidying, shopping, cooking, looking after home or children, paying bills) is impaired. 0 means not at all impaired and 8 means very severely impaired"

The psychometric properties of the WSAS has been examined in two articles: one involving two studies (patients treated for depression and patients treated for OCD; Mundt, Marks, Shear, & Greist, 2002) and a more recent study of IAPT patients treated for depression and anxiety (Zahra et al., 2014). Internal reliability coefficients have been reported as .83 (Zahra et al., 2014) with a range from .70 - .94 (Mundt et al., 2002) and a test-retest reliability of .73 across a mean 2 week-period (Mundt et al., 2002). WSAS scores converged with depression scores on the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960; r = .76) and the Patient Health Questionnaire-9 (PHQ-9; Spitzer, Kroenke & Williams, 1999; r = .58 – .74). The measure was found to significantly discriminate between depression severity bands indicated by the HRSD. Mundt and colleagues identified three WSAS score bands which discriminated between patients' levels of psychopathology: severe to moderately severe psychopathology (WSAS score >20), significant functional impairment but with less severe clinical symptoms (WSAS scores 10 – 20), and subclinical psychopathology (WSAS scores < 10).

In Study III, WSAS pre-treatment scores were included in the multilevel model as an explanatory/predictor variable of patient outcome. Conceptually, patient improvement could be in part attributed to patient pre-treatment functioning. The WSAS has been found to measure a unique

component of social functioning in addition to its convergence with patient depression and anxiety (Zahra et al., 2014).

Practitioner-completed measures (practitioner personal aspects)

Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003)

The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) is a 25-item self-report 5-point Likert-type scale measure. The measure has been found to converge with scores on hardiness, life satisfaction, extraversion, conscientiousness, emotional intelligence, optimism, subjective wellbeing (Campbell-Sills, Cohan, & Stein, 2006; Karairmak, 2010; Gucciardi, Jackson, Coulter, & Mallett, 2011; Ito, Nakajima, Shirai, & Kim, 2009; Kobasa, 1979; Torgalsboen, 2012; Yu & Zhang, 2007). The measure has shown divergent validity with perceived stress and stress-vulnerability (Connor & Davidson, 2003). The CD-RISC has an internal consistency of .89 for the full scale and correlations between items ranged from .3 to .7. Its test-retest reliability (intraclass correlation coefficient) is .87. The CD-RISC is measured as a unitary construct, where higher scores reflect higher levels of resilience. (For a full account of the CD-RISC see Chapter 3, section 3.5.4).

Basic Empathy Scale for Adults (BES-A; Carré, D'Ambrosio, Bensalah & Besche, 2013; Jolliffe & Farrington, 2006)

The Basic Empathy Scale for Adults (BES-A) is a 19-item self-report 5-point Likert-type scale measure of empathy using a 3-factor model (Carré, D'Ambrosio, Bensalah, & Besche, 2013). The three factors comprising cognitive empathy, emotional contagion and emotional disconnection have been found to converge and diverge in expected directions with the Interpersonal Reactivity Index (Davis, 1983), an alternative measure of empathy. The 3-factor model of the BES-A revealed internal consistency alpha values of .69 for cognitive empathy, .72 for emotional contagion and .82 for emotional disconnection. Practitioner empathy is examined as a unitary construct in the current thesis in order to retain the statistical power of the analyses across the multiple practitioner personal aspects examined. Higher scores on the BES-A reflect higher levels of empathy. (For a full account of the BES-A see Chapter 3, section 3.5.4).

Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003)

The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) is a 15-item self-report 6-point Likert-type scale measure of mindfulness. The measure has been found to converge with traits on clarity and attention, internal state awareness, and physical well-being and diverge with self-reflectiveness, public self-consciousness, social anxiety, rumination and emotional disturbance. The MAAS has an internal consistency ranging from .80 to .90 and a 4-week test-retest reliability of .81. For the current study, MAAS scores are expressed as total scores rather than average score as described by the authors. Higher scores on the MAAS reflect higher levels of mindfulness. (For a full account of the MAAS see Chapter 3, section 3.5.4).

Other patient-related measure

2007 Index of multiple deprivation

Patient data included indices of deprivation provided to each patient based on weighted indices derived by the UK government for 2007 (UK Government Web Archive, 2010). These indices were generated based on national statistics of 37 different domains of deprivation that included income, employment, education, health and disability, skills and training, living environment, and crime and barriers to housing services. The IMD identifies concentrations of geographical deprivation and can be used as relative (as opposed to an absolute) measure of deprivation where higher IMD values reflect higher deprivation levels. IMD values for each patient was provided by the routine practice service.

5.5.4 **Procedure**

During the initial analysis, experimenter bias was controlled: that is, the multilevel modelling analyses were conducted independently of the analyses of practitioner personal aspect scores. Patient outcome data and practitioner personal aspect scores were each allocated different practitioner identity numbers, thereby preventing the yoking of data. After related multilevel models were generated, identity numbers that could be yoked were provided to assess how personal aspects corresponded with practitioner effectiveness.

5.5.5 **Data variables applicable for MLM analysis**

The dataset in Study III comprised patient-completed PHQ-9 depression outcome scores of practitioners whose patient data could be yoked to their respective practitioner-completed personal aspect scores (n = 5,408). The MLM analysis enables the development of a regression model designed to control for variables that could provide an alternative explanation for practitioner variation in effectiveness. Variables that were examined comprised patient characteristic variables as follows: patient age, sex, ethnicity, employment status, functioning (via the WSAS), 2007 index of multiple deprivation of patients' area of residence (IMD), and whether patients were prescribed psychotropic medication before treatment.

Data for most practitioners was complete with missing values for a few across variables of whether patients were prescribed psychotropic medications before treatment, multiple deprivation, patient gender, and patient ethnicity. In total, missing values on patient characteristics were evident across 17 patients seen by eight practitioners with the data of one practitioner missing who had seen eight patients. Missing values on whether patients were on medication before treatment commenced was evident across a total of 254 patients treated by 30 practitioners (4.7% of patients of practitioners). The distribution of missing responses for this variable showed a mean proportion of 6.72 (SD = 16.46) per practitioner. Due to the prevalence of missing values for this variable, the variable was not included in the analysis. Nine values of multiple deprivation were missing. These were spread across two patients of each of two practitioners and as single missing values for five other practitioners. There were four missing patient gender values and six missing patient ethnicity values based on patient data for one practitioner. The proportions of missing values within this practitioner's data comprised 12.5% and 25% for patient gender and ethnicity respectively. Due to the irregular spread of missing values across this practitioners' patient variables, MLM analysis was conducted both with and without this practitioner data. Findings did not differ in the identification of more and less effective practice. All n = 37 practitioners were retained and patient characteristics of age, gender, ethnicity, employment status, functioning, and index of multiple deprivation were included for consideration in the MLM analysis.

Kruskal-Wallis tests were conducted to ascertain whether practitioners significantly differed in their respective patient case-mix in relation to the patient characteristics examined. Non-parametic analysis was conducted due to the presence of skewed patient demographics distributions amongst practitioners. Examples of these are displayed histograms in Table 5.1. Significant differences were found across all examined patient characteristics: age, $H(36) = 261.7$, $p < .05$; functioning, $H(36) = 352.9$, $p < .05$; index of multiple deprivation, $H(36) = 1579.5$, $p < .05$; sex, $H(36) = 136.3$, $p < .05$; ethnicity, $H(36) = 331.7$, $p < .05$; and unemployment, $H(36) = 265.0$, $p < .05$.

Tables 5.1a and 5.1b illustrate the degree to which practitioners varied on the patient characteristics examined. Table 5.1a is applicable to the spread of practitioners' proportions of case-mix for categorical patient variables (i.e., sex, ethnicity and employment). Table 5.1b applies to practitioners' case-mix for each continuous patient variable (i.e., age, functioning, and index of multiple deprivation).

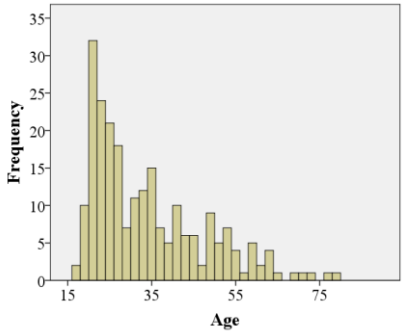
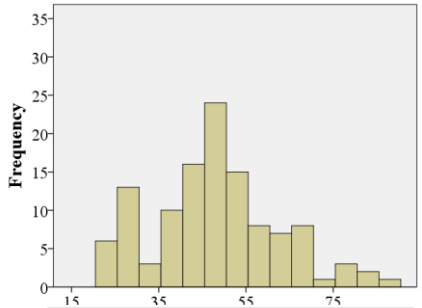
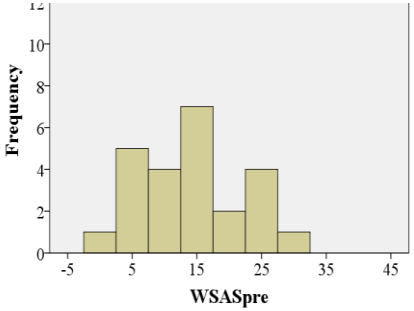
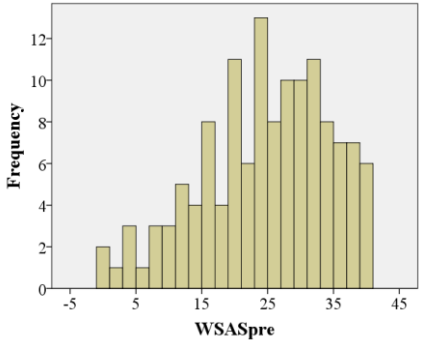
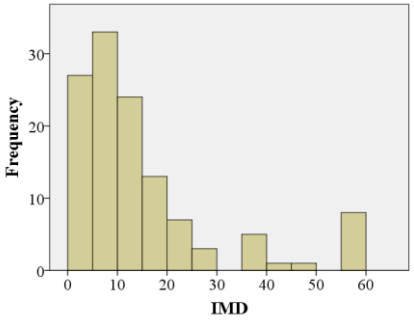
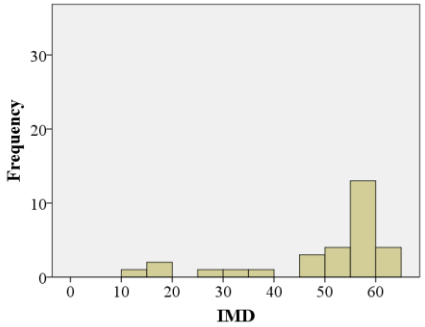
Tables 5.1a and 5.1b provide information on the spread of the number of patients of yoked respondent practitioners (n = 37) for respective patient characteristic variables and how these were reflected in relation to practitioners' case-mix patient samples (i.e., practitioners' mean and the range of practitioners' aggregate patient characteristic value). For example, patient outcome data of yoked practitioners showed an overall proportion of 32.9% (n = 1779) male and 67.0% (n = 3625) female patients. Aggregate proportions of patients' sex within each practitioner's case-mix were derived and revealed that on average practitioners had a comparable proportion of 32.31% male and 67.24% female patients. This, however, varied between practitioners. While male patients constituted a minority of patients, practitioners' case-mix ranged from having a smaller proportion of male patients (13.9%, 10 out of a total of 72 patients) to having a majority of male patients (63.3%, 19 out of 30 patients).

	Practitioners	Patients		Patient demographic per practitioner					
	N	n	%	Mean %	(SD)	Min %	n	Max %	n
Sex	37								
i) Male		1779	32.9	32.31	9.73	13.90	72	63.30	30
ii) Female		3625	67.0	67.24	9.77	36.70	30	86.10	72
Ethnicity	37								
i) White		4859	89.8	87.88	10.04	56.70	30	98.60	219
ii) Non-white		521	9.6	11.44	9.69	1.40	219	43.30	30
Employment	37								
i) Unemployed		1556	28.8	30.91	11.20	12.90	31	53.30	30
ii) Not unemployed		3852	71.2	69.09	11.20	46.70	30	87.10	31

Table 5.1a: Practitioners' proportions of case-mix for patient categorical variables (yoked data)

Table 5.1b presents the distribution of patient continuous variables. These comprised patient age, functioning, and index of multiple deprivation. Mean values were calculated for each practitioners' case-mix. Using practitioners' distributions of respective mean values, practitioners' overall mean and range of mean values were identified. On average, practitioners had a case-mix of patients aged 41.96 years (SD = 3.47). Practitioners' mean patient case-mix age ranged from 33.53 years (for a sample of 231 patients) to 48.07 years (for a sample of 117 patients). Practitioners case-mix had patients with a mean WSAS score of 18.05 (SD = 2.77) (i.e., level of significant impairment). However, practitioners' case-mix samples showed that practitioners varied in relation to their respective mean patient functioning impairment. This ranged from a practitioner who treated a mean of patients with functional impairment associated with less severe clinical symptoms (WSAS scores within 10 – 20; M = 14.29, SD = 8.27), and another practitioner who treated a mean of more functionally impaired patients (WSAS score >20; M = 24.29, SD = 9.73).

Table 5.1b: Practitioners' mean of case-mix for patient continuous variables (yoked data)

	Practitioners	Patients					Patient demographic per practitioner		
	n	n	%	Overall Mean	SD	Min Mean		Max Mean	
Age	37			41.96	3.47	33.53 (n = 231)		48.07 (n = 117)	
i) 15 – 29		1249	23.1						
ii) 30 – 49		2565	47.4						
iii) 50 – 69		1417	26.2						
iv) 70 – 89		177	3.3						
Functioning (WSAS pre-treatment score)	37			18.05	2.77	14.29 (n = 24)		24.29 (n = 131)	
i) Subclinical psychopathology (0-9)		1131	20.9						
ii) Less severe psychopathology (10-20)		2203	40.7						
iii) Moderately severe to severe psychopathology (> 20)		2074	38.4						
Index of Multiple Deprivation	37	5399	99.8	31.37	11.25	14.89 (n = 122)		49.92 (n = 30)	
i) IMD ≤ 25		2559	47.3						
ii) 25 < IMD ≤ 50		1770	32.7						
iii) 50 < IMD < 76		1070	19.8						

The distribution of deprivation across patients indicated a pattern where a majority of patients lived in relatively less deprived geographical areas, as evident of 47.3% (n = 2559) of patients living in areas indexed with relatively lower IMD values ≤ 25. The average practitioner had a case-mix of patients with a mean IMD of 31.37, (SD = 11.25), with individual practitioners' case-mix mean IMD's ranging from 14.89 (SD = 14.83) to 49.92 (SD = 14.47). Tables 5.1a and 5.1b show that while practitioners vary in the demographic profile of their patient case-mix, observations are tentative given the varying sample sizes upon which they are based.

5.5.6 **Data analysis**

Tools used and data transformations

The patient outcome dataset was analysed using SPSS Statistics version 21 and MLwiN version 2.30 (Rashbash, Charlton, Browne, Healy, & Cameron, 2009). SPSS was used to conduct preliminary analysis. MLwiN was applied to generate multilevel models with parameter values derived using the Iterative Generalised Least Squares (IGLS) estimation procedure.

Prior to the main analyses, preliminary analysis identified that the distributions of pre and post-treatment PHQ-9 scores were asymmetric. Pre-treatment PHQ-9 scores were significantly negatively skewed, skewness = -0.20 (SD = 0.033), D (5408) = 0.068, $p < .01$, and post-treatment PHQ-9 scores were significantly positively skewed, with a skewness coefficient of 0.24 (SD = 0.033), D (5408) = 0.090, $p < .01$. This indicates that more patients displayed higher scores at the start of treatment, whilst at end of treatment the reverse was apparent (i.e., more patients displayed lower scores). These data were therefore log-transformed for all subsequent analysis.

Analysis Strategy I: Developing a model to control for patient case-mix

MLM analysis began with testing whether a multilevel structure (i.e., with patients nested within practitioners) could be fit onto patient outcome data using a null/unconditional model, containing only patient post-treatment PHQ-9 scores as the response variable (Y). The subsequent analysis developed the multilevel model to include pre-treatment PHQ-9 scores as an explanatory variable (X), while testing for linear and curvilinear relationships.

A systematic approach was sought for developing a multilevel model further using patient-characteristic variables as explanatory variables. Each variable alone was inserted into the conditional model (taking into account of pre-treatment scores) to examine the degree of significant contribution that the variable made to post-treatment scores. The order of insertion of patient-characteristic variables was determined by the degree to which a variable contributed to the multilevel model. Variables that were found to show a higher magnitude of significant contribution were inserted first into the model, followed by variables that showed lesser significant contribution.

In developing the final model, respective patient characteristic variables were also inserted as interactions with patient pre-treatment PHQ-9 scores (e.g., to identify and control for interaction effects of patient characteristics with patient initial severity level of depression). Interaction effects were examined to take account of the importance of patient characteristics on patient change (Kazdin, 2007). Given that the focus of Study III was not to examine the nature of the relationship between patient characteristics, these variables were inserted into the model without exploration of random intercept or random slope models or polynomial functions. At each stage of development, models were retained based on whether model parameters were significant. Each model produced a -2Log Likelihood ratio. Improved models were judged as meaningful if there was a significant reduction of -2Log Likelihood (-2LL) ratios. Significance was tested using a chi-square test and determined on a probability of $p < .05$.

Analysis Strategy II: Identifying i) the contribution of each practitioner personal aspect towards patient outcome, and ii) the nature of the relationship between resilience and mindfulness using MLM

The final multilevel model assessed the significance and degree to which practitioner personal aspect variables contributed to patient change. Four practitioner personal aspect variables were separately inserted into the final multilevel model. These consisted of Resilience (R), Empathy (E), Mindfulness (M), and, combined Resilience and Mindfulness (R + M). Parameter values of significant models that included a practitioner personal aspect variable indicated population estimates of the unique contribution of the respective personal aspect variable towards patient outcome, after

controlling for practitioners' varying patient case-mix. The nature of the relationship between resilience and mindfulness was examined by inserting both variables in three formats into the final multilevel model. These comprised insertion as an additive variable (R + M), insertion as two separate variables (R and M), and insertion as an interactive variable (R x M).

Analysis Strategy III: Identifying personal aspects that differentiate between more effective and less effective practice

The final multilevel model generated was used to create a residual plot that consisted of 90% confidence intervals of patients' post-treatment outcome score residuals for each practitioner. A significant below average confidence interval (i.e., lower post treatment scores), indicated more effective practice. A significant above average confidence interval (i.e., higher post treatment scores) indicated less effective practice. Having identified practitioners who displayed more and less effective practice, the mean scores for practitioner personal aspect variables for more and less effective practice were compared using independent-samples t-tests.

Practitioners' personal aspect scores on each measure were standardised to Z-distribution scores, to illustrate relationships between resilience, empathy and mindfulness across more effective, effective and less effective practice. Standardised scores for the combined resilience and mindfulness variable were computed firstly by converting each practitioner score within the respective measures to Z-distribution scores, then obtaining an aggregate of these Z scores and finally standardising the aggregated Z scores to retain the characteristics of a Z-distribution.

5.6 Results

5.6.1 Results I: Findings while developing a model to control for patient case-mix

Initial analysis conducted on the patient outcome post-treatment scores of the yoked (n = 37) practitioners revealed a between-therapist variance estimate of 0.039 (SE = 0.011). Patient or error variance was 0.613 (SE = 0.012). The -2LL ratio showed a significant reduction when the model accounted for practitioner variance, $\chi^2(1) = 192.01$, $p < .001$. The therapist effect (ICC) calculated by practitioner variance divided by total variance (i.e., practitioner variance plus error variance) was

0.039/(0.039 + 0.613) = 0.059. This value illustrates that practitioners in the population, based on the current sample, are estimated to account for approximately 6% of patient outcome. The findings indicate that the data can be more accurately analysed using MLM analysis, as there were measurable significant variability between practitioners.

A single-level regression analysis identified that patient post-treatment scores could be explained as a quadratic function of patient pre-treatment scores. The estimated regression equation was:

$$PHQLast = \beta_0 + \beta_1 PHQPre + \beta_2 PHQPre^2 + e_i$$

$$PHQLast = 2.246 + 0.987\ PHQPre + 0.091 PHQPre^2 + e_i$$

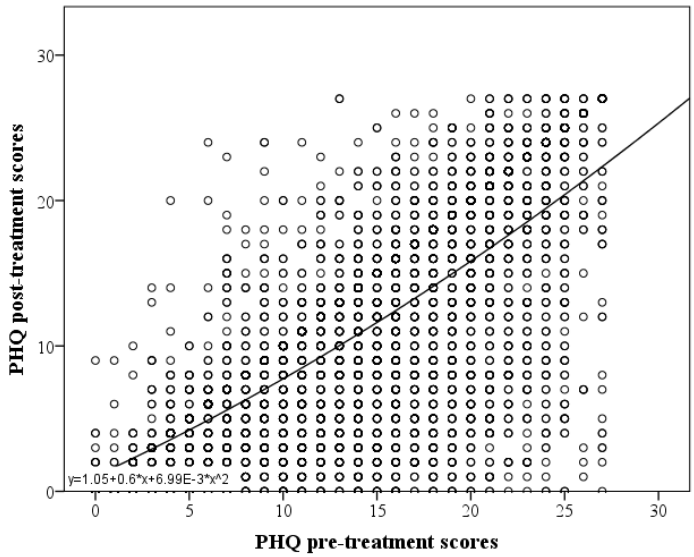
The equation indicates that as patient pre-treatment scores increase, their post-treatment scores increase at a cumulative rate. This suggests that patients with less severe pre-treatment depression show greater degrees of improvement while patients with more severe pre-treatment depression show increasingly smaller relative degrees of improvement. A random intercept multilevel model was then developed (see Figure 5.2 for model) while maintaining a common slope. The new model was an improved model from the single level model above, as indicated by a significant reduction in the -2LL ratio, $\chi^2(1) = 234.46$, $p < .001$. This conditional model similarly showed the association between patient post-treatment scores and a quadratic function of patient pre-treatment scores. Practitioner regression lines have an intercept mean of 2.213 (SE = 0.028) and a variance of 0.025 (SE = 0.007), indicative of practitioner level variance. Patients within practitioners show a variance of 0.341 (SE = 0.007). These values concerning practitioner variance and patient variance show an estimated therapist effect of 6.8% (i.e., 0.025 / (0.025 + 0.341)). The association between patient pre-treatment and post-treatment PHQ-9 scores is displayed in Figure 5.3.

Figure 5.2: Conditional random intercept multilevel regression model

$$\text{LNphqLast}_{ij} = \beta_{0j} + 0.977(0.019)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.086(0.014)(\text{LNphqPre-gm})\text{^}2_{ij} + e_{ij}$$
$$\beta_{0j} = 2.213(0.028) + u_{0j}$$

$$u_{0j} \sim N(0, \sigma^2_{u0}) \quad \sigma^2_{u0} = 0.025(0.007)$$
$$e_{ij} \sim N(0, \sigma^2_e) \quad \sigma^2_e = 0.341(0.007)$$
$$\textit{-2*loglikelihood} = 9613.730(5408 \text{ of } 5408 \text{ cases in use})$$

Figure 5.3: Scatterplot of patient pre-treatment and post-treatment PHQ-9 scores



The following stage of model development involved fitting random slopes to the random intercept model. Models were unable to be generated for a random intercept and random slope model using IGLS estimation procedures. The analysis retained a conditional model showing a random intercept quadratic function of patient pre-treatment scores as population estimates of patient post-treatment scores.

Preliminary analysis of patient characteristic variables was conducted to ascertain the order that these variables should be inserted while developing a final multilevel model. There were 6 patient-characteristic variables comprising: age, gender, ethnicity, employment status, functioning, and index of multiple deprivation. Each of these variables was inserted into the conditional model above and ordered in respect to the degree of significant contribution made by the respective variable

to the model. Table 5.2 provides a summary of variable contribution with its standard error and the respectively test value assessing the significance of the model (χ^2 test value).

Table 5.2: Results of the contribution of individual patient-characteristics

Order	Variable	β value	(SE)	χ^2 –test value
1.	Employment status (being unemployed relative to not being unemployed)	0.179	(0.019)*	92.594**
2.	Ethnicity (being white relative to not being white)	-0.100	(0.028)*	26.973**
3.	Functioning	0.007	(0.001)*	43.449**
4.	Age	-0.004	(0.001)*	37.743**
5.	IMD	0.003	(0.000)*	61.670**
6.	Gender (being male)	0.004	(0.017)	3.996

* p <.05
** p <.001

Patient variables of employment status, ethnicity, and gender are categorical variables. For these variables, descriptions are provided in Table 5.2, indicating the reference group to which beta values reflect. As an example, patients who are unemployed are estimated to increase patient post treatment scores by 0.179 relative to patients who are not unemployed.

The findings indicate that all variables except for patient gender showed significant contribution towards patient post-treatment scores. Patient employment status made the largest significant contribution and patients' index of multiple deprivation demonstrated the smallest significant contribution to patient outcome scores. Patient characteristic variables (excluding patient gender) were subsequently inserted into the conditional multilevel model in stages indicated in Table 5.2.

The final multilevel model was developed across 12 stages. Each patient-characteristic variable followed by that patient-characteristic variable and its interaction with pre-treatment scores were inserted progressively. A detailed summary of findings across the stages of model development can be seen in Appendix XV. The final model generated is shown in Figure 5.4.

Figure 5.4: Final random intercept multilevel model of patient post-treatment scores with explanatory variables of patient-characteristics

$$\text{LNphqLast}_{ij} = \beta_{0j} + 0.821(0.026)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.035(0.015)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.131(0.020)\text{unemployed}_{ij} + 0.085(0.039)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + -0.067(0.027)\text{white}_{ij} + 0.006(0.001)(\text{WSASpre-gm})_{ij} + -0.003(0.001)(\text{Age-gm})_{ij} + -0.002(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + 0.002(0.001)(\text{IMD-gm})_{ij} + e_{ij}$$

$$\beta_{0j} = 2.240(0.037) + u_{0j}$$

$u_{0j} \sim N(0, \sigma^2_{u0})$ $\sigma^2_{u0} = 0.022(0.006)$

$e_{ij} \sim N(0, \sigma^2_e)$ $\sigma^2_e = 0.329(0.006)$

*-2*loglikelihood* = 9393.073(5393 of 5408 cases in use)

The model in Figure 5.4 shows a therapist effect value of 6.3% (i.e., 0.022/(0.022 + 0.329)). This indicates that when accounting for patient characteristics, practitioners in the population are estimated to account for approximately 6% of patient outcome. Practitioner regression lines have varying intercepts with a mean of 2.240 (SE = 0.037) and a variance of 0.022 (SE = 0.006). From the model, patient post-treatment outcome scores are explained by single variable estimates of patient initial severity, employment status, ethnicity, functioning level, age and geographical deprivation level. The model also includes interaction variables between patient employment status and their initial severity, and the interaction between patient age and patient severity.

5.6.2 Results II: Findings while identifying i) the contribution of each practitioner personal aspect towards patient outcome, and ii) the nature of the relationship between resilience and mindfulness using MLM

Practitioner personal aspect variables were each inserted into the final multilevel model above and significant contributions to patient outcome for these variables were identified after having controlled for practitioners' patient characteristics. The practitioner personal aspect variables of resilience, mindfulness, and R+M, each made a significant contribution towards reducing patient outcome scores: resilience, β = -.007 (SE = .003); mindfulness, β = -.007 (SE = .002); R+M, β = -.046 (SE = .014). These similarly improved the final multilevel model as shown by the significant reduction in the -2LL ratio for resilience, $\chi^2(1) = 6.09$, $p < .05$, mindfulness $\chi^2(1) = 6.68$, $p < .05$, and R+M, $\chi 2(1) = 9.53$, $p < .05$. In contrast, the inclusion of resilience and mindfulness as two separate personal aspects in the multilevel model resulted in both variables showing non-significant

contributions: resilience, β = -.005 (SE = .003); mindfulness, β = -.005 (SE = .003). A significant contribution was identified when the two variables were included as an interactive variable, β = -.000068 (SE = .000021). The interactive variable improved the final multilevel model, $\chi^2(1) = 8.97$, $p < .05$. A detailed summary of findings is shown in Appendix XVI. Figure 5.5 contains 5 multilevel models, which each reflects the significant findings for this analysis in relation to the practitioner personal aspect variables that contributed to patient outcome.

Figure 5.5: Final multilevel models which include:

5.5a Practitioner resilience

$$\text{LNphqLast}_{ij} = \beta_{0j} + 0.821(0.026)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.035(0.015)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.131(0.020)\text{unemployed}_{ij} + 0.085(0.039)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + -0.067(0.027)\text{white}_{ij} + 0.006(0.001)(\text{WSASpre-gm})_{ij} + -0.003(0.001)(\text{Age-gm})_{ij} + -0.002(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + 0.002(0.000)(\text{IMD-gm})_{ij} + -0.007(0.003)(\text{TPTotalRFinal-gm})_j + e_{ij}$$

$$\beta_{0j} = 2.247(0.035) + u_{0j}$$

$u_{0j} \sim N(0, \sigma^2_{u0})$ $\sigma^2_{u0} = 0.018(0.005)$
$e_{ij} \sim N(0, \sigma^2_e)$ $\sigma^2_e = 0.329(0.006)$
*-2*loglikelihood* = 9386.986(5393 of 5408 cases in use)

5.5b Practitioner mindfulness

$$\text{LNphqLast}_{ij} = \beta_{0j} + 0.821(0.026)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.035(0.015)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.131(0.020)\text{unemployed}_{ij} + 0.086(0.039)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + -0.069(0.027)\text{white}_{ij} + 0.005(0.001)(\text{WSASpre-gm})_{ij} + -0.003(0.001)(\text{Age-gm})_{ij} + -0.002(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + 0.002(0.000)(\text{IMD-gm})_{ij} + -0.007(0.002)(\text{TPTotalMFinal-gm})_j + e_{ij}$$

$$\beta_{0j} = 2.253(0.035) + u_{0j}$$

$u_{0j} \sim N(0, \sigma^2_{u0})$ $\sigma^2_{u0} = 0.018(0.005)$
$e_{ij} \sim N(0, \sigma^2_e)$ $\sigma^2_e = 0.329(0.006)$
*-2*loglikelihood* = 9386.393(5393 of 5408 cases in use)

5.5c Practitioner R + M

$$\text{LNphqLast}_{ij} = \beta_{0j} + 0.821(0.026)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.036(0.015)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.131(0.020)\text{unemployed}_{ij} + 0.086(0.039)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + -0.068(0.027)\text{white}_{ij} + 0.006(0.001)(\text{WSASpre-gm})_{ij} + -0.003(0.001)(\text{Age-gm})_{ij} + -0.002(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + 0.002(0.000)(\text{IMD-gm})_{ij} + -0.046(0.014)(\text{TPRandMFinal-gm})_j + e_{ij}$$

$$\beta_{0j} = 2.255(0.035) + u_{0j}$$

$u_{0j} \sim N(0, \sigma^2_{u0})$ $\sigma^2_{u0} = 0.016(0.004)$
$e_{ij} \sim N(0, \sigma^2_e)$ $\sigma^2_e = 0.329(0.006)$
*-2*loglikelihood* = 9383.541(5393 of 5408 cases in use)

5.5d Practitioner R and M

$$\begin{aligned}\text{LNphqLast}_{ij} = {} & \beta_{0j} + 0.821(0.026)(\text{LNphqPre-gm})\text{^}1_{ij} + 0.036(0.015)(\text{LNphqPre-gm})\text{^}2_{ij} + \\ & 0.131(0.020)\text{unemployed}_{ij} + 0.086(0.039)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + \\ & -0.068(0.027)\text{white}_{ij} + 0.006(0.001)(\text{WSASpre-gm})_{ij} + -0.003(0.001)(\text{Age-gm})_{ij} + \\ & -0.002(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + 0.002(0.000)(\text{IMD-gm})_{ij} + \\ & -0.005(0.003)(\text{TPTotalRFinal-gm})_{j} + -0.005(0.003)(\text{TPTotalMFinal-gm})_{j} + e_{ij}\end{aligned}$$

$$\beta_{0j} = 2.255(0.035) + u_{0j}$$

$$u_{0j} \sim N(0, \sigma^2_{u0}) \quad \sigma^2_{u0} = 0.016(0.004)$$
$$e_{ij} \sim N(0, \sigma^2_{e}) \quad \sigma^2_{e} = 0.329(0.006)$$
$$-2*loglikelihood = 9383.528(5393 \text{ of } 5408 \text{ cases in use})$$

5.5.e Practitioner R x M

$$\begin{aligned}\text{LNphqLast}_{ij} = {} & \beta_{0j} + 0.8213354(0.0257810)(\text{LNphqPre-gm})\text{^}1_{ij} + \\ & 0.0355480(0.0146038)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.1308701(0.0200156)\text{unemployed}_{ij} + \\ & 0.0860454(0.0389665)\text{unemployed.(LNphqPre-gm)}\text{^}1_{ij} + -0.0682047(0.0274622)\text{white}_{ij} + \\ & 0.0055299(0.0010959)(\text{WSASpre-gm})_{ij} + -0.0029240(0.0005744)(\text{Age-gm})_{ij} + \\ & -0.0024788(0.0008751)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + \\ & 0.0023868(0.0004985)(\text{IMD-gm})_{ij} + \\ & -0.0000679(0.0000214)\text{TPTotalRFinal.TPTotalMFinal}_{j} + e_{ij}\end{aligned}$$

$$\beta_{0j} = 2.5500062(0.1030020) + u_{0j}$$

$$u_{0j} \sim N(0, \sigma^2_{u0}) \quad \sigma^2_{u0} = 0.0164996(0.0045730)$$
$$e_{ij} \sim N(0, \sigma^2_{e}) \quad \sigma^2_{e} = 0.3292103(0.0063616)$$
$$-2*loglikelihood = 9384.0990583(5393 \text{ of } 5408 \text{ cases in use})$$

Across all models displayed above, personal aspects showed an inverse relationship with patient outcome - where a unit increase for each of the practitioner personal aspect variables was related to a decrease in patient outcome depression scores. Notably, resilience and mindfulness combined was associated with the relatively largest estimated reduction in patient outcome of 0.046 (SE = 0.014).

The varying contributions of the practitioner personal aspects can also be appreciated by comparing the therapist effect values generated across the final model and each model containing a practitioner personal aspect. Table 5.3 shows how all personal aspects that made significant

contributions to patient outcome also show reduced therapist effect sizes when inserted into the final model, as compared to the therapist effect of the final model. For example, the ICC coefficient when resilience was inserted into the final model was 0.052 (therapist effect = 5.2%) compared to the ICC values of the final model without any practitioner personal aspect variables of 0.063. Note that while the patient variance value remained consistent at 0.329, reductions in ICC were due to a decrease in practitioner variance alone. The therapist effect was lowest with the inclusion of R+M or RxM, reflected in the relatively largest reduction of practitioner variance of 0.022 to 0.016. These values suggest that the personal aspects taken together rather than separately, accounted for a relatively greater difference between practitioners. Drawing a comparison between an additive versus an interactive relationship, reveals that the former relationship makes a notably larger contribution towards patient outcome in contrast to an interactive contribution.

Table 5.3: Random variance coefficients of relevant multilevel models.

Multilevel model	Personal aspect contribution	Practitioner Variance (μ_{0j})	Patient / error variance (e_{ij})	Therapist effect %) (μ_{0j} / (μ_{0j} + e_{ij}))
Final model	-	.022	.329	6.3
Final model with R	-.007	.018	.329	5.2
Final model with M	-.007	.018	.329	5.2
Final model with (R + M)	-.046	.016	.329	4.6
Final model with R and M: - R - M	 (ns) (ns)	 - -	 - -	 - -
Final model with (R x M)	-.00007	.016	.329	4.6

5.6.3 **Results III: Findings while identifying personal aspects that differentiate between more effective and less effective practice**

i) Residual plot – identification of more and less effective practice

The residual plot had an overall patient post-treatment mean demonstrated by the dotted horizontal line across the plot. Effectiveness of each practitioner is represented by a 90% confidence interval of residual scores indicated by the vertical bars with those confidence intervals that cross the overall post-treatment mean identifying effective practice. A significantly below average confidence

interval identifies more effective practice (i.e., bars below the overall mean). A significant above average confidence interval identifies less effective practice (i.e., bars above the overall mean). Figure 5.6 shows the residual plot for the final model, which evidences significant variation between practitioners after controlling for patient characteristics.

Figure 5.6: Residual plot of final model

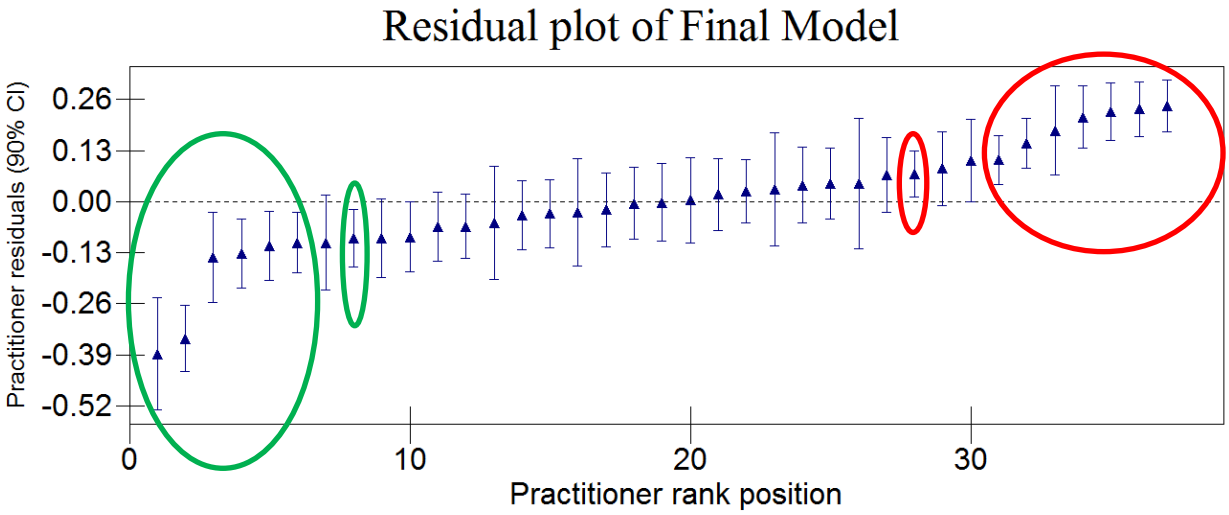


Figure 5.6 shows the residuals of the 37 yoked practitioners along the y-axis and their respective ranking along the x-axis. The residual plot identifies n = 7 practitioners (circled in green) whose residual bars lay below the overall practitioner mean post-treatment score and n = 8 practitioners (circled in red) whose residual bars lay above the overall practitioner mean post-treatment score. These practitioner clusters were grouped as more effective (n = 7) and less effective (n = 8) respectively and examined for significant differences in practitioner personal aspect variables.

ii) ***Identification of personal aspects that differentiated between more effective and less effective practice***

Table 5.4 shows the comparisons between more effective and less effective practice for all practitioner personal aspect variables. Statistically significant differences were found in respect to mindfulness t (13) = -2.53, p = .03, effect size r = .57, 95% CI[.09, .84]; and R+M, t (13) = -2.62, p = .02, effect size r = .59, 95% CI[.11, .85]. More effective practitioners showed higher levels of mindfulness (M = 69.86, SD = 4.06) compared to less effective practitioners (M = 58.63, SD = 11.80).

Similarly more effective practitioners showed higher levels of combined resilience and mindfulness (M = .43, SD = .67) compared to that of less effective practitioners (M = -.80, SD = 1.07). No significant differences were identified for resilience, t (13) = -1.66, p = .12, effect size r = .42, 95% CI[-.12, .77]; and empathy t (13) = 0.81, p = .44, effect size r = .22, 95% CI[-.33, .66].

Table 5.4: T-test results comparing practitioner personal aspects between more effective and less effective practice groups

Group Sample Size		Yoked Respondent Practitioner Sample (n = 37)			
More Effective (Below mean)	Less effective (Above mean)	Effective practice based on multilevel model controlling for patient pre-treatment depression and patient characteristic variables (t-test values)			
		R	E	M	R + M
7	8	-1.66	0.81	**-2.53***	**-2.62***

* p<.05

Table 5.5 presents the mean standardised scores of personal aspects across the three practitioner effectiveness groups (i.e., more effective, effective and less effective) based on the residual plot of the final multilevel model (Figure 5.3).

Table 5.5: Mean standardised scores of personal aspects across more effective, effective, and less effective practice

	More effective practice		Effective practice		Less effective practice	
	M	SD	M	SD	M	SD
Resilience	0.26	0.95	0.16	0.87	-0.68	1.20
Empathy	-0.16	0.91	-0.03	1.09	0.21	0.89
Mindfulness	0.47	0.41	0.10	0.96	-0.67	1.20
Resilience + Mindfulness	0.43	0.67	0.15	0.93	-0.80	1.07

Corresponding with the values presented in Table 5.5, Figure 5.7 displays a graph of the standardised scores of personal aspects enabling visual comparisons of these personal aspects between practitioners identified as more effective, effective, and less effective

Figure 5.7: Graph of practitioners' mean standardised personal aspect scores:

Mean personal aspect scores for effective practice have a central location between diverging scores across more effective and less effective practice. Scores appear to fall within two distinct clusters of patterns. Standardised scores for empathy related to effective practice appear close to or below their respective distribution means of zero. In contrast, standardised scores on resilience, mindfulness, combined R+M related to effective practice appear slightly above their respective distribution means. Empathy scores show a mild reduction in relation to more effective practice with a mild increase related to less effective practice. The other practitioner personal aspects show more distinct differences in scores between more effective and less effective practice in the reverse direction (i.e., indicating that higher levels of resilience, mindfulness, as well as resilience, and mindfulness, are associated with more effective practice).

5.7 **Discussion**

Study III utilsed multilevel modelling analysis to identify practitioners who displayed more and less effective practice generalisable within the broader population of psychotherapy practitioners. The study then sought to identify the unique personal aspects associated with more effective in contrast to less effective practice

Therapist effects in Study III fell within the range 6% to 7 % with a therapist effect of 6.3% when controlling for patients' initial severity of depression and patient-characteristic variables. This finding is comparable with Baldwin and Imel's (2013) meta-analysis, which yielded a therapist effect for practice-based evidence studies of 7%. The finding suggests that 6-7% of patient outcome is attributable to practitioners.

The final multilevel model indicated that patients who show higher post-treatment depression scores (i.e., relatively poorer outcomes) comprise those patients who firstly present with relatively more severe depression. Patients who were unemployed showed relatively poorer outcomes. In addition, unemployment appeared to increase the impact of the initial severity of depression on patient outcome. Patients with poorer outcomes were also associated with people of non-white ethnicity, patients with poorer pre-treatment functioning levels and patients who live in more deprived geographical areas. Being relatively younger contributed to poorer outcomes in itself and appears to moderate the impact of initial depression severity: younger patients with more severe depression showed poorer outcomes compared to a relatively older patients with more severe depression.

Practitioner personal aspects were examined for: i) their significant predictive ability of better patient outcomes, ii) the nature of the relationship between resilience and mindfulness, and iii) whether they significantly differentiated between more effective and less effective practice, and iv) patterns in which they varied between more effective and less effective practice. Most findings were internally consistent; practitioners with relatively higher levels of resilience, mindfulness, and combined resilience and mindfulness predictably delivered more effective practice as indicated by better patient outcomes. While these positive contributions were significant, the magnitude of their contributions varied: combined resilience and mindfulness showed a relatively large magnitude of

contribution compared to resilience and mindfulness alone. This result was consistent with t-test findings that showed practitioners who deliver more effective practice have significantly higher levels of mindfulness and combined resilience and mindfulness when compared to practitioners who deliver less effective practice. The combined personal aspects of resilience and mindfulness similarly differentiated more effective from less effective practice. In contrast to the personal aspects, which predicted better patient outcome, personal aspects of empathy consistently showed no significant contribution to patient outcomes. Additionally, patterns suggest that more personal empathy could inversely affect the delivery of effective practice. The broader implications of these findings and the nature of the relationship between resilience and mindfulness in context of findings from the other studies reported in this thesis are presented in Chapter 8.

Although the findings of Study III are generalisable to the broader population of psychotherapists, the generalisability is limited to practitioners who provide treatment akin to the structural model of IAPT. For example routine practice services where practitioners predominantly provided an intensity of treatment matched to the severity level of patient presentation(s). Limitations are also present on the extent to which the current findings can be generalised, given that specific measures were applied and there exists a lack of similar research evidence across other routine practice settings and using alternative patient outcome measures and personal aspect measures.

6 Chapter 6

Study IV

High-intensity versus combined high and low-intensity respondent samples: A comparison

6.1 Introduction

Study IV constitutes a preliminary study with the continued focus towards examining practitioners who yield better patient outcomes. It is the first in a line of subsequent studies (Studies V to VII) aimed at utilising qualitative research methodology to identify salient themes reported by more effective compared to less effective practitioners themselves. Analyses across the following studies focuses on a more homogeneous subsample of high intensity practitioners (Step 3; n = 29) in contrast to one comprising a combination of high and low intensity practitioners (Steps 2 & 3; n = 37). This is due to the adoption of qualitative analysis in Study V in contrast to quantitative analyses conducted in Studies II and III. Differences in researchers' epistemology are more evident when utilising differing research approaches (e.g., qualitative versus quantitative research). Researchers' epistemological perspective or worldview guides their approach and writing. For quantitative analysis, researchers hold an empiricist or positivistic view that regards reality as quantifiable, objective, and universal. In contrast, for qualitative research, views include interpretivism where reality is seen as relative and multiple (Hudson & Ozanne, 1988).

In considering the current research question and different realities of high as opposed to low intensity practitioners using open-ended questions, practitioner responses are likely to reflect the different emphasis between high and low intensity treatment which could represent a confound if practitioner responses are analysed using a single frame of reference for the interpretation of responses. Also, conceptually, analysis of high intensity practitioners only, may yield clearer differences between more effective and less effective practice (Saxon & Barkham, 2012). Study IV addresses the question of whether the high intensity patient and practitioner samples differ in other ways apart from expected differences in levels of patient severity.

6.2 **Method**

While the current chapter examines a subsample of high intensity practitioners (n = 29) out of the sample of high and low intensity practitioners (n = 37), Study IV aims to verify the demographic validity of the subsample. This is achieved by comparing the practitioner and patient demographic properties between the high intensity (n = 29) and low intensity (n = 8) practitioners and their respective patient subsamples.

6.3 **Measures**

6.3.1 **Patient Health Questionnaire-9 (PHQ-9; Spitzer, Kroenke, & Williams, 1999)**

A full description of the PHQ-9 is presented in Chapter 4, Section 4.4.3, however a brief description is provided as follows. The Patient Health Questionnaire-9 (PHQ-9) is a brief self-report 4-point Likert-type scale measure of depression. The measure has shown validity with constructs that include mental health, general health perceptions, social functioning and role functioning using the Short-Form General Health Survey (Kroenke et al., 2001). A valid measure of major depressive disorder, the PHQ-9 has a sensitivity of 0.8 and a specificity of 0.9 (Gilbody, Richards, Brealey, & Hewitt, 2007). The measure has an internal reliability of .89 and a test-retest reliability of .84 across 48 hours. (For a full account of the PHQ-9, see Chapter 4, Section 4.4.6).

6.4 **Data analysis**

Data analysis was conducted to assess whether the sub-sample of yoked high intensity respondents (n = 29) was demographically similar to the total yoked respondent sample containing high and low intensity practitioners (n = 37). In order to ascertain this, statistical tests were conducted on the independent samples of high intensity practitioners (n = 29) versus low intensity practitioners (n = 8). Chi-square or Fisher's exact tests were conducted for categorical variables and independent samples t-test for continuous variables. Fisher's exact tests were adopted instead of Chi-square tests where expected frequencies in more than 20% of cells were less than 5 with no expected frequency being less than 1 (Field, 2011).

6.5 **Results**

6.5.1 **Patients**

Patient data analysed in Study IV were derived from a subsample of the final dataset on all practitioners' patients (n = 5408) – that is, patients of CBT therapists and counsellors who provided high intensity treatment (n = 3050). (For information on how the final dataset was derived, see Chapter 4, Section 4.4.3). According to the PHQ-9 scores, for patients who received high intensity treatment, a total of 2827 (92.7%) presented with mild to severe levels of depression and 2784 (91.3%) presented with mild to severe levels of anxiety. On average, patients presented with moderate levels of depression (PHQ-9) and anxiety (GAD-7) with mean respective pre treatment scores of 14.8 (SD = 6.5) and 13.0 (SD = 5.5). Patients received between 1 and 33 treatment sessions with a modal number of 1 session provided to 688 patients (22.6%) and a mean of 5 sessions (SD = 4.7).

Table 6.1 presents demographics for all patients (n = 5408), high intensity patients (n = 3050), and low intensity patients (n = 2358). Chi-square tests were conducted comparing demographic variables of patients treated by high intensity practitioners and those treated by low intensity practitioners. Significant differences were identified across all patient demographic variables as follows: Patient sex, χ^2 (1) = 6.52, p = .011; age χ^2 (3) = 15.41, p = .001; ethnicity χ^2 (4) = 19.10, p = .001; employment status χ^2 (1) = 33.43, p < .001; and pre-treatment depression levels χ^2 (4) = 16.73, p = .002. These significant differences may be present due to the large magnitude of the group sample sizes. Effect sizes for categorical variables in the form of odds ratios were calculated where variables had two categories (i.e., patient sex and employment status). It was found that the odds of being a male patient was 0.86 times as likely when treated by low intensity practitioners compared to when treated by high intensity practitioners. Also, the odds of being unemployed was 1.43 times as likely when treated by high intensity practitioners than by low intensity practitioners. These suggest that male patients and unemployed patients were more likely treated by high than low intensity practitioners.

Table 6.1: Patient demographics of all yoked practitioners (n = 5408), all yoked high intensity practitioners (n = 3050), and all yoked low intensity practitioners (n = 2358)

	Patients of all Practitioners (n = 5408)		Patients of High Intensity Practitioners (n = 3050)		Patients of Low Intensity Practitioners (n = 2358)	
	n	%	n	%	n	%
Sex						
- Male	1779	32.9	959	31.4	820	34.8
- Female	3625	67.0	2087	68.4	1538	65.2
Age						
- 15 – 29	1249	23.1	651	21.3	598	25.4
- 30 – 49	2565	47.4	1468	48.1	1097	46.5
- 50 – 69	1417	26.2	838	27.5	579	24.6
- 70 – 89	177	3.3	93	3.0	84	3.6
Ethnicity						
- White	4859	89.8	2700	88.5	2159	91.6
- Asian	179	3.3	101	3.3	78	3.3
- Black	118	2.2	88	2.9	30	1.3
- Mixed	116	2.1	67	2.2	49	2.1
- Other	108	2.0	68	2.2	40	1.7
Employment						
- Unemployed	1556	28.8	973	31.9	583	24.7
- Not unemployed	3852	71.2	2077	68.1	1775	75.3
Depression (PHQ-9 pre-treatment score)						
- None (0-4)	428	7.9	223	7.3	205	8.7
- Mild (5-9)	897	16.6	474	15.5	423	17.9
- Moderate (10-14)	1286	23.8	716	23.5	570	24.2
- Moderately Severe (15-19)	1395	25.8	792	26.0	603	25.6
- Severe (20–27)	1402	25.9	845	27.7	557	23.6
Number of practitioners:						
- PWPs	8	21.6	-	-	8	100.0
- CBT therapists	12	32.4	12	41.4	-	-
- Counsellors	17	45.9	17	58.6	-	-
Treatment received						
- Low intensity (PWP)	2358	43.6	-	-	2358	100.0
- High intensity (CBT)	1292	23.9	1292	42.4	-	-
- High intensity (Counselling)	1758	32.5	1758	57.6	-	-

A notable observation between the datasets indicated some expected differing patterns of spread of patient depression severity levels due to the stepped care model. As would be expected, a relatively higher proportion of patients with moderately severe to severe depression received high intensity treatment in contrast to receiving low intensity treatment. Table 6.1 shows that patients with

moderately severe and severe depression seen by high intensity practitioners totalled 1637 (792 + 845; i.e., 53.7% of high intensity practitioners' patients). In comparison, patients with moderately severe and severe depression seen by low intensity practitioners totalled 1160 (603 + 557; i.e., 49.2% of PWPs' patients). The opposite pattern is reflected considering patients with less severe levels of depression where high intensity practitioners treated a relatively smaller proportion of patients – 1413 (223 + 474 + 716; i.e., 46.3%) with milder to moderate depression in contrast to 1198 (205 + 423 + 570; i.e., 50.8%) of the same for low intensity practitioners.

6.5.2 **Practitioners**

Table 6.2 provides a summary of practitioner demographics: of all practitioners (n = 37) and the breakdown between high intensity practitioners (n = 29) and low intensity practitioners (n = 8). Amongst categorical variables, all findings reported more than 20% expected cell frequencies of less than 5, therefore Fisher's exact significance values were examined. No significant differences were identified across practitioner sex (p = .65, Fisher's exact test), ethnicity (p = 1.00, Fisher's exact test), qualification (p = .74, Fisher's exact test) and work-related experience (p = .88, Fisher's exact test).

Across continuous variables, independent samples t-tests identified no significant differences between the current working hours, t (25) = 0.68, p = .50 of high and low intensity practitioners. No significant differences were also found in relation to practitioners' history of number of work-related roles t (25) = -0.98, p = .33 between high and low intensity practitioners.

Significant differences were identified in two areas: firstly in relation to practitioners' age, t (32) = -3.94, p <.001, with high intensity practitioners showing a higher age (M = 51.33, SD = 10.44) than low intensity practitioners (M = 34.71; SD = 7.43). Both practitioner groups varied considerably in terms of their ages: high intensity practitioners had modal ages of 50 and 51 (age range 28 – 72) while low intensity practitioners had a modal age of 29 (age range 29 – 48).

Table 6.2: Practitioner demographic of all yoked practitioners, high intensity practitioners, and low intensity practitioners

	Professional Groups											
	High and Low intensity practitioners				High intensity practitioners				Low intensity practitioners			
	n = 37				n = 29				n = 8			
	n	%	M	SD	n	%	M	SD	n	%	M	SD
Age			47.9	11.9			51.3	10.4			34.7	7.4
Sex												
- Male	9	24.3			8	27.6			1	12.5		
- Female	28	75.7			21	72.4			7	87.5		
Ethnicity												
- White	36	97.3			28	96.6			8	100.0		
- Black	1	2.7			1	3.4			-	-		
Practitioner Qualification												
- Graduate												
- Post Graduate	1	2.7			1	3.4			-	-		
- PhD	30	81.1			24	82.8			6	75.0		
	1	2.7			1	3.4			-	-		
Current working hours (per week)			29.9	8.0			29.3	8.3			31.9	7.4
Practitioner work-related experience (WTE bands)												
- 0 – 10 years												
- 10 – 20 years	21	56.8			16	55.2			5	62.5		
- Over 20 years	8	21.6			6	20.7			2	25.0		
	8	21.6			7	24.1			1	12.5		
History of number of work-related roles			3.9	2.2			4.1	2.3			3.3	1.6
Reasons for preferred personal treatment approach												
- Treatment strengths	13	35.1			9	31.0			4	50.0		
- Treatment-self match	7	18.9			6	20.7			1	12.5		
- Treatment-illness match	8	21.6			7	24.1			1	12.5		
- Unfamiliar treatment	3	8.1			0	0.0			3	37.5		
- Provided by a practitioner who values the approach	2	5.4			2	6.9			0	-		
- Whatever approach that is available	1	2.7			1	3.4			0	-		
Professional Discipline												
- Psychological Wellbeing	8	21.6			-	-			8	100.0		
- CBT	12	32.4			12	41.1			-	-		
- Counselling	17	45.9			17	58.6			-	-		

Secondly, the practitioner groups differed with respect to practitioners' reported reasons for their preferred personal treatment approach ($P = .04$, Fisher's exact test). This variable may reflect, to some degree, practitioners' personal views of conditions when a preferred treatment may be effective for a patient (hypothetically, themselves).

From Table 6.2, amongst the 29 high intensity practitioners, nine (31%) indicated a range of responses where their preferred treatment would be effective based on its strengths, six (20.7%) preferred treatment that would better match with themselves personally, and 7 (24.1%) preferred a treatment that better matched their presenting difficulty at the time. In contrast, for low intensity practitioners, a larger proportion (50%; i.e., four practitioners) indicated that the strengths of the treatment would matter, while three practitioners (37.5%) stated a preference for receiving a treatment that they were not familiar with. Related to the role of the therapist in delivering effective treatment, only two (6.9%) of high intensity practitioners identified a condition concerning the person of the treating therapist.

In summary, high intensity practitioners were found to differ from low intensity practitioners in relation to the severity levels of the patients they treated. Low intensity practitioners saw relatively more patients with less severe depression compared to high intensity practitioners. High intensity practitioners showed a relatively higher probability of working with patients who were male and not unemployed. Practitioners significantly differed in their ages, with high intensity practitioners being older relative to low intensity practitioners. High intensity practitioners indicated a preference for treatment for themselves considering the strengths of the treatment and the match of the treatment with themselves. In contrast, a majority of low intensity practitioners indicated a preference for treatment for themselves considering primarily treatment strengths.

Study V

Qualitative analysis of unstructured responses of high intensity practitioners

6.6 Introduction

Study V seeks to identify recurrent salient themes while learning *from* practitioners' self-conceptualisations of their professional practice. This is in contrast to Studies I-III that sought to learn *about* practitioners' personal aspects in relation to their effectiveness. Study V draws on a different type of data that is necessarily qualitative, in order to elicit what practitioners themselves consider as factors that have shaped their practice both historically and currently. The reason for examining practitioners' perspectives is that qualitative responses (together with the previous quantitative responses) may provide a broader more comprehensive perspective and enable closer inferences to be drawn. Study V facilitates a better understanding of how practitioners themselves may deliberately or otherwise apply themselves. Given the central role of practitioners in delivering treatment approaches, it is important to understand how practitioners' view themselves in their professional roles, their accounts of factors that have influenced their practice and how they approach their practice.

Study V gives voice to the practitioner in routine practice settings, re-privileging them as researchers learn from them, and builds on previous studies that have examined practitioners' perspectives. These include research comprising extensive surveys of practitioners in terms of their development as psychotherapists conducted by Orlinsky et al., (1999), interviews of therapists regarded as "master therapists" who were identified using peer nominations conducted by Jennings and Skovholt (1999), and interviews of low-intensity treatment (PWPs) IAPT practitioners conducted by Green et al., (2014). Looking at the design of these three studies, practitioner samples comprised those who worked in a range of settings: from internationally diverse settings (Orlinsky et al., 1999), to therapists in American private practice settings (Jennings & Skovholt, 1999), to practitioners in different IAPT services settings in England (Green et al., 2014). Study V draws on perspectives of practitioners employed by one IAPT service ensuring homogeneity related to the influence of service

organisational structure. It reduces organisational-level confounds associated with similarities and differences experienced by practitioners and their patients employed within and between different organisations.

In summary, Study V differs from Studies II and III in three ways: (i) by studying practitioners' personal accounts; (ii) by adopting template analysis (as the chosen form of qualitative analytic approach), and (iii) by examining a subsample of yoked practitioner respondents (i.e., high intensity practitioners only). Overall, Study V aims to generate a helicopter view of salient themes within practitioners' accounts and constitutes a preliminary analysis and a platform for the final studies – Study VI and Study VII – which are presented in Chapter 7. Study VI applies the zeroing in strategy of multilevel modelling to identify more effective and less effective high intensity practice and Study VII focuses on more and less effective practice to identify themes unique to more effective practice.

6.7 **Method**

Study V examined unstructured responses of high intensity practitioners (n = 29). These responses were analysed using qualitative analytic approaches of Wordle and Template Analysis to identify common themes evident in practitioner responses. The researcher was blind with regards to practitioners' effectiveness throughout the analyses.

6.7.1 **Control of experimenter bias**

Practitioners' unstructured responses were analysed for themes prior to analysis of practitioners' patient outcome scores. By following this sequence of analyses, the researcher was not biased by findings of practitioner effectiveness when interpreting practitioners' written responses and identifying prevalent themes.

6.8 **Measure**

6.8.1 **Practitioner unstructured questionnaire**

"Reflecting on me as a person and as a practitioner"

The questionnaire booklet comprised 16 questions organised into 4 sections as follows:

i) Section 1: What practitioners report that they personally bring to their professional practice (e.g., "Please list 5 words you feel describe you as a person in relation to your practice"),

ii) Section 2: Practitioners' accounts of personal life influences on their professional practice (e.g., "What are the significant life experiences or relationships in your personal life which have been influential in developing and/or nurturing what you now bring to your practice?"),

iii) Section 3: Practitioners identified professional life influences of their professional practice (e.g., "Since you started your career as a practitioner, what are the significant experiences within your professional practice which have been influential in developing and/or nurturing what you bring to your practice?"), and

iv) Section 4: Practitioners' perspective of their wellbeing in relation to their professional practice (e.g., "How does your wellbeing impact on the professional service you deliver?").

Specific questions for the questionnaire were adapted from Jennings and Skovholt's (1999) interview questions for 'master' therapists. One question associated with professional self-doubt was adapted from the Development of Psychotherapists Common Core Questionnaire (DPCCQ: Nissen-Lie at al., 2013; Orlinsky et al., 1999). Questions were included to assess practitioners' perspectives on their retrospective career development as well as their currently experienced career development as indicated by Orlinsky and colleagues (1999) in a extensive study which examined determinants of professional development of psychotherapists. Two questions covered assessment of (a) professional self-doubt and (b) practitioners' response to challenging patients. These questions aimed to identify differences between more and less effective practice as suggested by research findings which indicate that professional self-doubt is related to early working alliance (Nissen-Lie, Monsen, & Rønnestad, 2010), patient outcome (Nissen-Lie, Monsen, Ullegerg, & Rønnestad, 2013b), and that differences in

therapists' effectiveness are larger when examining practitioners' treatment of more severe patients (Saxon & Barkham, 2012). The complete unstructured questionnaire is displayed in Appendix XVII.

The unstructured questionnaire was distributed within questionnaire booklets. Practitioners were requested to complete the booklet in the sequence set out and used their personal discretion as to when and where they completed the questionnaires.

6.9 **Preliminary examination of data**

Preliminary examination of practitioners' unstructured responses revealed three occurrences of missing responses across two practitioners: one with missing information on historical influential professional life events and another with missing information on anticipated supervisor descriptors and personal therapy. As missing responses were infrequent with no evidence of systematic non-responses, all practitioner responses were retained for analysis.

6.10 **Data analysis**

6.10.1 **Wordle analysis**

Identification of practitioners' salient personal descriptors

As an initial overview to show the impact of practitioners' self-descriptors, a form of analysis that provided a visual representation was selected: Wordle analysis. Wordle is a computer software program that generates 'word-clouds'. A word-cloud is a visual representation of words randomly grouped based on any text or words being analysed. The more frequently a word occurs in a text being analysed, the larger the size of that word in the word-cloud, giving immediate prominence to frequent as opposed to infrequent words. Word clouds have been recommended as an adjunct research tool (McNaught & Lam, 2010) and used in a variety of fields: for example, the study of journal content (Atenstaedt, 2012), literature (Clement, Plaisant, & Vuillemot, 2008), public speeches (Dann, 2008), and education survey responses (Ramsden & Bate, 2008). The Wordle software enables users to paste words into a designated space and users are then able to manipulate the design, font, layout, and colour settings of the generated Wordle. More advanced users have options to paste words with numbers to denote their frequency and codes that denote the use a specific colours. This

advanced application may enable users to filter specific words for their final Wordle. For the current analysis, word clouds were designed using the less advanced application by pasting practitioners' personal descriptors using the same font, layout, and colour settings with no touch-ups in order to present the data with the least manipulation.

Practitioners listed 10 descriptive words of themselves in relation to their practice. Five words reflected their personal descriptors and five words reflected those they would consider to be provided by their supervisor. Wordle analysis treats each word as a distinct entity and therefore does not accommodate word combinations, words with similar meanings, or words that vary in their form. Due to this limitation, it was necessary to adjust certain descriptors. Some practitioners provided multiple words or different word forms, for example, "empathy" (on two occasions) or "empathetic" (on two occasions) rather than "empathic". Of the total of 272 descriptors, Word adjustments were carried out for 26 (9.56%) of the descriptors. This comprised using hyphenated words (e.g., "open-minded" instead of "open minded", using words in the form of adjectives and using consistent words where appropriate (e.g., "humourous" instead of "humour" or "good-humoured"). All word adjustments were judged as retaining the meaning of the descriptors provided by practitioners. The final descriptors were analysed using Wordle to identify the predominant self-reported characteristics.

Two word-clouds were generated reflecting (a) prominent descriptors provided by practitioners of themselves together with (b) those they consider would be provided by their supervisors. The first word-cloud was based on responses provided by all yoked practitioner respondents, that is, low intensity and high intensity practitioners (n = 37), and a second based on responses provided by yoked high intensity practitioners only (n = 29).

6.10.2 **Template analysis**

Practitioners provided unstructured responses to open-ended questions that bore a degree of association to each other as all questions were related to their professional practice. As such, Template Analysis was selected which enabled i) the identification of themes, and ii) the creation of a structured template that incorporated the relationship between themes.

Template Analysis (TA; King, 1998) involves a process where qualitative data is analysed and organised into a template that represents relationships between themes within a hierarchical structure (King, 2004, 2012). A template comprises broader, higher order themes and more specific lower order themes related to higher order themes. TA features the construction of an initial template and an iterative process involving the development of themes related to the research question while maintaining 'selectivity' and 'openness' (King, 2004). The practice of selectivity and openness is described as a way of ensuring a balance between being selective in identifying relevant themes whilst being open to themes that are not of obvious direct relevance. The approach has been used across a variety of research fields including health research (Brooks, McCluskey, King, & Burton, 2012; King, Thomas, Bell, & Bowes, 2003).

TA was conducted on all practitioner responses. Responses were read while viewing each practitioner as a whole (i.e., within practitioners) and read within each question and theme between practitioner responses. Where applicable, responses were analysed both broadly across expressions or phrases, and specifically in relation to the nature of words used by practitioners within responses. An *a priori* template, consistent with the layout of the questionnaire design, was used at the start of the analysis to organise practitioner responses. Higher and lower order themes followed from the four questionnaire sections and 16 questions respectively. For initial template design, see Appendix XVIII. Analyses of all practitioner responses involved defining and modifying relevant lower order themes and sub-themes through an iterative process. Following the iterative process, as responses were re-read and notations were made, labels for lower order themes and lower order subthemes were created and/or eliminated.

In addition to identifying themes based directly on practitioner responses, a case-wise, aggregate theme was created to take into account occasions where lower orders themes displayed the same lower order subthemes. This was conducted to maximise the possible findings from practitioner responses by examining more broadly consistent themes within practitioner responses in addition to examining themes between practitioner responses. A final coding table of themes was generated from which all template analyses were conducted. For the final coding table of themes, see Appendix XIX.

6.11 **Results**

6.11.1 **Wordle analysis**

Word cloud images based on all practitioners' self-descriptors (n = 37) and only high-intensity practitioner descriptors (n = 29) are shown in Figures 6.1(a) and 6.1(b) respectively.

Figure 6.1(a): Word-cloud of self-descriptors of all yoked practitioner respondents (n = 37)

Figure 6.1(b): Word-cloud of self-descriptors of all yoked high-intensity practitioners (n = 29)

From both figures, the word "empathic" appears disproportionately larger than all other words indicating that it was the most frequently provided self-descriptor across high and low intensity practitioners. Secondly, self-descriptors of "warm" and "caring" are prominent suggesting that many practitioners gave significance to their manner of relating to patients. Thirdly, other self-descriptors such as "organised", "reflective", "flexible", "hardworking", "committed" emerge while relating primarily to practitioners' more personal skills in contrast to more relational descriptors. This pattern suggests that most practitioners consider the perspective of how they are experienced by patients as

being important relative to having personal characteristics that contribute or enhance their practice. In relation to the practitioner aspects of interest, other than empathy (i.e., resilience and mindfulness), 'resilience' was given some prominence (see above and right of "emphatic"). However, there is no word indicated on 'mindfulness'.

6.11.2 **Template Analysis**

Table 6.3 provides a summary of the final template derived following analysis of all responses of high intensity practitioners (n = 29). The template contains five higher order themes with 16 lower order themes that contain varying sub-themes indicated from practitioners' ranges of responses.

Iterative analyses of practitioner responses indicated a recurrence of three primary subthemes in their perspectives related to i) the patient (practitioners' sensitivity to patients or patient-orientation), ii) the self (practitioners' self-awareness), and iii) therapeutic skills (practitioners' skills and competencies). These three subthemes were identified within the higher order themes of "Retrospective Professional Development" (lower order theme 8) and "Challenging Patients" (lower order theme 12) and were used to generate an aggregate theme (i.e., higher order theme V: Personal Approach). Examples of quotes from practitioners across all themes are presented in Appendix XX.

I. Practitioners' self-view

Most practitioners (26, 89.7%) reported having a distinguishing personal characteristic. These included personal aspects, specific behaviours, or a broad perspective on life. In contrast, three practitioners (10.3%) reported having no distinguishing personal characteristic. One practitioner's response suggested that having a distinguishing personal characteristic could impact on practice and that this consequence should, preferably, not occur.

II. Practitioners' personal life

Life experiences and personal reflection: Practitioners recounted positive (20, 69%) and negative (26, 89.7%) life experiences that they identified as been influential in contributing to what they personally brought to their practice.

Table 6.3: Template of qualitative responses of high intensity practitioners

Higher order themes	Lower order themes	Practitioner response-indicated subthemes	Number	Proportion
I. Self-View	1. Distinguishing personal characteristic	- Yes	26	89.7
		- No	3	10.3
II. Personal Life	2. Life experiences	- Negative	26	89.7
		- Positive	20	69.0
	3. Personal reflection		21	72.4
	4. Personal therapy	- Yes	22	75.9
		- No	4	13.8
	5. Influence of personal therapy	- Technique awareness	7	24.1
		- Sensitivity to patient process	16	55.2
		- Self-awareness	7	24.1
	6. Reason for becoming a practitioner	- To help	16	55.2
		- Interest	16	55.2
		- Awareness that one possesses ability to help	7	24.1
		- Circumstance	14	48.3
III. Professional Life	7. Historical influences	- All sources except patient (e.g., training, supervision, reflection)	24	82.8
		- Patient – general influence	21	72.4
		- Patient – elaborate influence	5	17.2
	8. Retrospective Professional Development (PD)	- Skill development	21	72.4
		- Patient-sensitivity	13	44.8
		- Self-awareness	23	79.3
	9. Current (PD)	- Yes	29	100.0
	10. Professional self-doubt	- Yes	29	100.0
	11. Professional self-doubt response	- Therapeutic skills	26	89.7
		- Patient engagement	12	41.4
		- Patient engagement (anxious)	2	6.90
	12. Challenging patients	- Therapeutic skills	22	75.9
		- Patient-sensitivity	24	82.8
		- Self-awareness	20	69.0
IV. Wellbeing	13. Impact	- Energy and concentration	29	100.0
	14. Wellbeing activities	- Yes	29	100.0
	15. Mindfulness-related activities	- Yes	24	82.8
		- No	5	17.2
V. Personal approach (aggregate theme)	16. Combined lower-order themes of "Retrospective PD" (8) & "Challenging patients" (12).	- Therapeutic skills	18	62.1
		- Patient-orientation	12	41.4
		- Self-awareness	17	58.6

Many practitioners (21, 72.4%) provided reflections on their experiences where they indicated how their experiences contributed to their person, although this elaboration was not requested. These reflections suggested an association between practitioners' life experiences and their abilities to be resilient in dealing with personal life stressors and to be empathic in understanding others who similarly experience significant life stressors.

Personal therapy and influence of personal therapy: A majority of practitioners (22, 75.9%) reported having received personal therapy beyond that required by their accreditation process and benefited from personal therapy in a combination of ways. These comprised being more aware of different therapeutic approaches, being more sensitive to the experience of being a patient, and being more self-aware as a personal benefit from therapy.

Reasons for becoming a practitioner: In respect to reasons for becoming a practitioner, a combination of motivating factors was provided. Many practitioners (16, 55.2%) indicated that their motivation stemmed from a desire to help others and/or interest in psychology. Practitioners also reported that it was circumstances (14, 48.3%) for example receiving encouragement from friends and timely opportunities for training that influenced their course towards becoming a practitioner.

III. Practitioners' professional life

Historical influences: Practitioners identified influential factors within their own personal histories that included professional supervision, training, work experience, personal reflection, and experiences with patients. Given the wide range of contributors, these were categorised primarily between 'all sources except patient' and patient only. Responses from 24 practitioners (82.8%) included non-patient factors. In respect to experiences with patients, practitioners varied in the degree of description provided where many practitioners (21, 72.4%) reported having learned from patients in general while a small number of practitioners (5, 17.2%) indicated a more elaborate influence that their patients had on their practice: for example, by observing how different patients resolve their problems themselves.

Retrospective and current professional development: In recollecting how they have changed professionally since they started their career, most practitioners identified being more skilled (21, 72.4%) and self-aware (23, 79.3%), with relatively fewer practitioners indicating having developed more patient-sensitivity (13, 44.8%). All practitioners reported that they continued to experience professional development currently.

Professional self-doubt: All practitioners indicated that they experienced occasions where they lacked confidence regarding their effectiveness while working with patients. When asked how they responded when this occurs, most practitioners' responses indicated the use of therapeutic skills (26, 89.7%) with fewer practitioners reporting that they would engage with patients to address professional self-doubt (12, 41.4%).

Challenging patients: When faced with a challenging patient, responses by a majority of practitioners indicated that they responded in a patient-sensitive manner (24, 82.8%) with relatively fewer practitioners indicating adaptation of therapeutic skills (22, 75.9%) and/or being self-aware (20, 69%).

IV. Wellbeing

Practitioners reported that their wellbeing had an impact on the degree of energy and concentration they are able to draw on when delivering psychotherapy. All practitioners listed various activities they engaged in to maintain their general wellbeing. These included personal relaxation activities, physical activities, and social activities.

In respect to mindfulness-related activities, a majority of practitioners (24, 82.8%) reported engaging in a mindfulness activity comprising informal (e.g., mindfulness when walking or watching the clear night sky) and/or formal (e.g., meditation) activities, as well as prayer-related mindfulness (e.g., keeping a prayer journal and/or praying). Table 6.4 displays practitioners reported engagement between CBT therapists and counsellors. Percentage values are reflected in respect to the total number of high intensity practitioners (n = 29). Values indicate that a majority of practitioners who engage in mindfulness activities comprise counsellors (48.3%) compared to CBT therapists (34.5%).

Table 6.4: Mindfulness activities between CBT therapists (n = 12) and counsellors (n = 17)

	CBT therapist (n = 12)		Counsellors (n = 17)		Total (n = 29)	
	n	%	n	%	n	%
Formal mindfulness exercises	6	20.7	4	13.8	10	34.5
Informal mindfulness exercises	7	24.1	9	31.0	16	55.2
Prayer-related mindfulness	0	0.0	5	17.2	5	17.2
Any mindfulness activity	10	34.5	14	48.3	24	82.8

Counsellors' report engaging in relatively more informal and prayer-related mindfulness exercises compared to CBT therapists. Across all practitioners, CBT therapists engage in relatively more formal mindfulness activities. Within the respective practitioner groups, a majority of both CBT therapists (10/12; 83.3%) and counsellors (14/17; 82.4%) report engaging in at least one form of mindfulness activity.

V. Personal approach

Within each practitioner, consistencies were recorded for responses across lower order themes of Retrospective Professional Development (lower order theme #8) and Challenging patients (lower order theme #12). These consistencies related to practitioner subthemes on skills, patient-sensitivity, and self-awareness across. A total of 18 (62.1%) practitioners consistently mentioned the significance of therapeutic skills in relation to their retrospective professional development and when responding to challenging patients. Twelve (41.4%) practitioners consistently indicated significance of patient-sensitivity and 17 (58.6%) practitioners indicated significance of being self-aware.

6.12 **Summary**

Studies IV and V comprised two studies that provide the platform for Studies VI and VII. Study IV sought to identify whether high intensity practitioners differed from low intensity practitioners in other ways apart from differences expected in patient severity levels. Findings for Study IV are discussed in the current section. Study V set out to analyse practitioners' unstructured

responses using Template Analyses. In contrast, findings for Study V are presented in summary form as these constitute preliminary findings that are utilised in further qualitative analysis in Study VII.

In respect to Study IV, high and low intensity practitioners were found to statistically differ in respect to their patient and personal demographics. Looking at patient demographics, the practitioner groups differed marginally on the severity levels of the patient they treated in the expected directions. High intensity practitioners provided treatment to more patients with relatively more severe levels of depression in contrast to low intensity practitioners who provided treatment to more patients with less severe levels of depression. Significant differences across all patient demographics were attributed to the large patient sample (i.e., regarded as less than meaningful findings). Demographic proportions of patients seen by low and high intensity practitioners showed comparable features comprising a majority of female patients, aged 30-49, of white ethnicity and not unemployed.

In regards to practitioner demographics, two statistically significant differences were identified across practitioners' age and the reason for a preferred treatment approach if they were to receive treatment. High intensity practitioners were significantly older than low intensity practitioners by a mean age difference of approximately 17 years. Despite differences in practitioners' ages there was no empirically significant differences identified in practitioners' work experience and history of work roles. The data, however, suggested that high intensity practitioners had comparably more work experience. The proportion of high intensity practitioners with over 20 years of experience was larger compared to low intensity practitioners. This observation would be consistent given the age differences between the practitioners and the historical context of IAPT. The unique role of PWPs commenced in 2006 with a demonstration delivery of IAPT services in Doncaster and Newham (Clark, 2011). Given the newness of the role, there was less likelihood of extensive work-related experience in similar roles associated with the delivery of low intensity interventions. Given limited work experience together with being of a younger age, an implication of these differences is that findings from Studies V (and subsequently Studies VI and VII) may not be generalizable to practitioners who are of a younger age and/or practitioners who have lesser work-related experience.

Practitioner groups differed in respect to their personal reasons for a preferred treatment approach if they were to receive treatment. Although it is not possible to conclusively rely on ratings provided given the small sample of low intensity practitioners across six response options, the stated preferences suggest that practitioners themselves possess varying perspectives of the constituents of effective practice, which do not necessarily include the person of the practitioner.

Across the questions posed (i.e., including unstructured questions), responses varied in three related areas pertaining to the person of the practitioner. Firstly, a few practitioners indicated consideration of practitioners' competence related to *personally valuing the treatment approaches* they provide compared to the majority of practitioners who indicated significance to treatment strengths and treatment match with patients. Secondly, a majority of practitioners recognised the presence of *unique personal characteristics* compared to a minority of practitioners who did not recognise this or suggested that having a personal characteristic could be detrimental to professional practice. Thirdly, and consistent with research findings, all practitioners recognised the importance of their *wellbeing* and its impact on their practice. These findings perhaps suggest that practitioners' perspectives of their personal role in the delivery of treatment are multifaceted and can vary across different domains. More specifically, findings focus on how they personally relate to the treatment approach delivered, their unique characteristics, and their personal wellbeing. In light of these findings, a general question could be raised: Is there an extent to which practitioners need to consider themselves as personally significant in contributing to effective practice?

Comparing between responses provided by high and low intensity practitioners, it appears that low intensity practitioners gave more significance to treatment strengths compared to treatment match with patients. This difference may reflect, to some degree, how low intensity practitioners' while delivering brief treatment in one theoretical approach perhaps need to hold a relatively stronger belief in the treatment approach in itself as the preferred approach. In contrast, the longer treatment duration for more severely depressed patients involved for high intensity practitioners may enable a different appreciation by practitioners of contextual factors involved for the provision of treatment (e.g., patient-treatment match).

In Study V, practitioners were found to identify strongly or place significant emphasis on being empathic with less emphasis on being resilient and limited consideration on being mindful. It could be suggested that perspectives held by practitioners on the prominence of empathy is partly influenced by the significant amount of research that has been given to the role and function of empathy when providing psychotherapy. Discussion on findings on empathy across Study V in relation to that of Studies I – III is addressed in Chapter 8.

Study V involved analysis aimed at providing a helicopter view of practitioners' perspectives. There was no incidence of specific responses requiring a detailed commentary. Template Analysis of practitioners' responses revealed variations in relation to their personal life influences, professional life influences, their way of coping with challenges in their practice, wellbeing and enduring personal approaches. In general, practitioners' responses indicated willingness in practitioners to be open and to volunteer relevant personal insights. A degree of openness was indicated as practitioners disclosed both positive and negative life experiences spanning their childhood to adulthood and providing voluntary insights as to how these contributed to their ability to be empathic. A certain degree of openness was indicated where practitioners reported their reasons to become practitioners. These included not only altruistic reasons but also reasons of personal interest in the subject matter and reasons of it being a chance occurrence. Practitioner responses also suggested a certain degree of candidness, for example, where practitioners expressed apprehensions related to dealing with professional self-doubt. These provide some degree of confidence in practitioners' responses as being reliable.

Observations on practitioners' report of engagement in mindfulness activities show that a majority of practitioners engage in formal, informal and/or prayer-related mindfulness. These comprise of relatively more counsellors than CBT therapists. A notable observation in respect to responses provided on practitioners' professional life is the identification of three primary themes related to practitioners' skills, their patient-sensitivity, and self-awareness. It is arguable that these three factors are comprehensive in addressing the possible areas in which practitioners could be actively involved while working with patients.

Findings in Study V are discussed in the context of Study VII analyses in the following Chapter 7. From a helicopter view of practitioners' perspectives there is a shift in focus on high intensity practitioners who deliver more and less effective practice. Study VI uses multilevel modelling to identify those more and less effective high intensity practice. Study VII yokes the established template of practitioners' responses from Study V to the more and less effective practice identified in Study VI. Themes unique to more effective practice compared with less effective practice is subsequently ascertained in Study VII.

7 Chapter 7

Study VI

Identification of more and less effective high intensity practice using MLM analysis

7.1 Introduction

Study VI sets out to identify more and less effective practice within a sample of high intensity practitioners. The study uses Mulitlevel Modelling (MLM) as it derives more internally valid and generalisable findings. MLM analyses enable the control of variations in practitioners' patient case-mix patient variables that could alternatively explain differences in more and less effective practice. MLM also derives estimate values within its models, not only based on the sample data but also based on an estimated population distribution or empirical Bayes estimation (Goldstein, 2011; Hox, 2010). Findings on more and less effective practice are aimed to represent practitioners from the general population who treat a case-mix of patients with more severe levels of depression and with no pre-dominant patient features (for example in respect to functioning and ethnicity).

Study VI follows the same procedure of MLM analysis as conducted in Study III. A primary difference in the analyses between these studies is that Study III examined effective practice across all yoked high and low intensity practitioners (n = 37), while Study VI examines effective practice across high intensity practitioners (n = 29) only. The reason for the selection of this subsample is that findings are to be yoked with qualitative findings from Study V that identified themes across high intensity practitioners. Given epistemological differences between qualitative and quantitative research (Hudson & Ozzane, 1988) and the prevailing sample sizes (with more high intensity compared to low intensity respondents), a more homogeneous sample of practitioners comprising high intensity practitioners were selected for analyses.

7.2 Design

Patient outcome depression scores (PHQ-9; Spitzer, Kroenke, & Williams, 1999) were examined using MLM to identify practitioners who displayed more and less effective practice. MLM

analyses were conducted using MLwiN version 2.30. Findings from these analyses constitute precursors to subsequent analyses in Study VII.

7.3 **Measures**

7.3.1 **Patient depression outcome measure:**

Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., 1999)

The PHQ-9 is a brief self-report measure of depression containing items that correspond to each of the nine DSM-IV-TR criteria for depression (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – DSM-IV-TR; American Psychiatric Association, 2000). The measure has shown validity with constructs that include mental health, general health perceptions, social functioning and role functioning using the Short-Form General Health Survey (Kroenke et al., 2001). A valid measure of major depressive disorder, the PHQ-9 has a sensitivity of 0.8 and a specificity of 0.9 (Gilbody, Richards, Brealey, & Hewitt, 2007). The measure has an internal reliability of .89 and a test-retest reliability of .84 across 48 hours. For a full account of the PHQ-9, see Chapter 4, Section 4.4.6.

7.3.2 **Patient measure of functioning:**

Work and Social Adjustment Scale (WSAS: Marks, 1986; Mundt, Marks, Shear, & Greist, 2002)

The WSAS is a brief, 5-item self-report measure of functioning impairment attributable to an identified psychological disorder. The measure has been found to discriminate between patients' levels of psychopathology; from severe to moderately severe (WSAS score >20), significant functioning impairment with less severe clinical symptoms (WSAS scores 10 – 20), and subclinical psychopathology (WSAS scores < 10; Mundt, Marks, Shear, & Greist, 2002). WSAS scores have converged with depression scores (r =.76) on the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960). It has an internal reliability ranging from.70 –.94 and a test-retest reliability of.73 across a mean 2-week period. For a more detailed account of the WSAS, see Section 5.6.3.

7.3.3 **Patients' geographical deprivation index:**

2007 Index of multiple deprivation

Patient data included indices of deprivation provided to each patient based on weighted indices derived by the UK government for 2007 (UK Government Web Archive, 2010). These indices were generated based on national statistics of 37 different domains of deprivation that included income, employment, education, health and disability, skills and training, living environment, crime, and barriers to housing services. The IMD identifies concentrations of geographical deprivation and can be used as relative (as opposed to an absolute) measure of deprivation where higher IMD values reflect higher deprivation levels. IMD values for each patient were provided by the routine practice service.

7.4 **Preliminary examination of data - Patient data variables applicable for MLM analysis:**

Practitioner variation in patient case-mix was examined to ascertain whether significant differences existed between practitioners' respective patients which could alternatively explain variability in practitioner effectiveness. Non-parametric Kruskal-Wallis tests were conducted given the presence of non-normal distributions of patient variables across practitioners. Significant differences were identified across all patient variables: patient functioning, $H(28) = 268.5$, $p < .05$, patient index of multiple deprivation, $H(28) = 1073.8$, $p < .05$; patient sex, $H(28) = 117.9$, $p < .05$; patient ethnicity, $H(28) = 203.4$, $p < .05$; patient unemployment, $H(28) = 135.7$, $p < .05$; and patient age, $H(28) = 147.4$, $p < .05$.

Tables 7.1a and 7.1b illustrate the degree by which practitioners varied on the patient characteristics examined. Table 7.1a relates to patient categorical variables (i.e., patient sex, ethnicity, and employment), while Table 7.1b relates to patient continuous variables (i.e., patient age, functioning and index of multiple deprivation). The tables provide information on the distribution of the number of patients of yoked high intensity practitioners (N = 29) across the respective patient characteristic variables and how these were reflected in relation to practitioners' case-mix patient samples (i.e., practitioners' mean and the range of practitioners' aggregate patient characteristic

value). Inspection of the patients' employment levels, the dataset shows an overall smaller proportion of unemployed patients of 31.9% (n = 973) and a corresponding larger proportion of patients who were not unemployed, 68.1% (n = 2077). This pattern, however, is not consistent across practitioners, with one practitioner having a smaller proportion of unemployed patients with four out of 31 patients (12.9%) and another practitioner having a majority of unemployed patients with 16 out of 30 patients (53.3%).

Table 7.1a: Proportions of case-mix for patient categorical variables for (n = 29) yoked high-intensity practitioners

	Patients		Patient demographic per practitioner					
	n	%	Mean %	SD	Min %	n	Max %	n
Sex								
- Male	959	31.4	31.90	10.66	13.90	72	63.30	30
- Female	2087	68.4	67.52	10.73	36.70	30	86.10	72
Ethnicity								
- White	2717	89.1	87.92	9.93	56.70	30	98.60	219
- Non-white	327	10.7	11.22	9.47	1.40	219	43.30	30
Employment								
- Unemployed	973	31.9	31.70	11.31	12.90	31	53.30	30
- Not unemployed	2077	68.1	68.30	11.31	46.70	30	87.10	31

Table 7.1b presents the distribution of patient age, functioning, and index of multiple deprivation. Average values are presented taking into account all practitioners' respective patient variable mean values. In addition, the range of practitioners' respective patient variable means is presented with a display of the practitioner histograms to illustrate how patient variable scores vary. For example, on average practitioners' patient case-mix were aged 42.45 years (SD = 3.33). Individual practitioners, however, varied in their mean patient age case-mix from 36.48 (for a sample of 89 patients) to 48.07 (for a sample of 117 patients). Mean values appeared to vary as a function of practitioners' respective sample sizes and the skewness of their patient distribution on the respective

patient variables. Practitioners' patient functioning (WSAS score) mean varied from significantly impaired with less severe clinical symptoms with a score of 14.29 (for a sample of 24 patients) to significant impairment with moderately severe to severe symptoms with a score of 24.29 (for a sample of 131 patients).

There is a greater discrepancy in relation to practitioners' mean patient IMD indicated by two practitioners with skewed patient distributions: a positively skewed distribution with a mean of 14.89 and a negatively skewed distribution with a mean of 49.92 showing a relatively higher level of mean patient social deprivation.

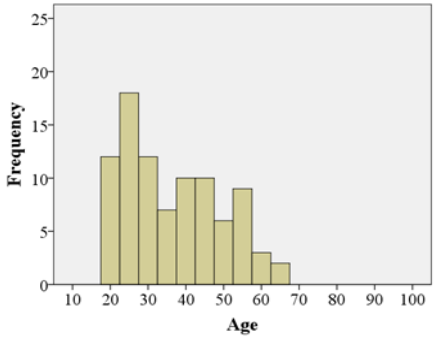
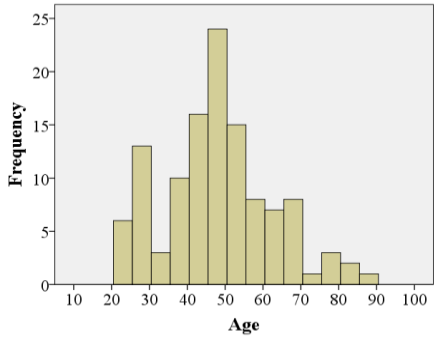
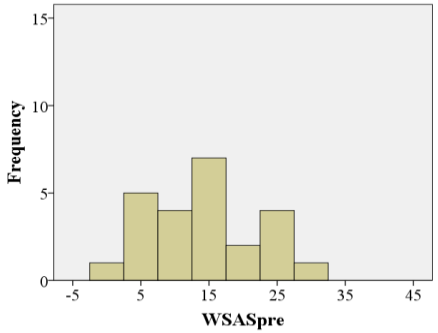
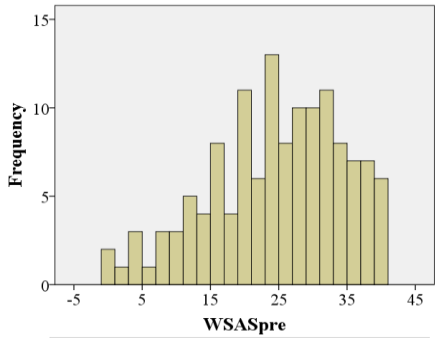
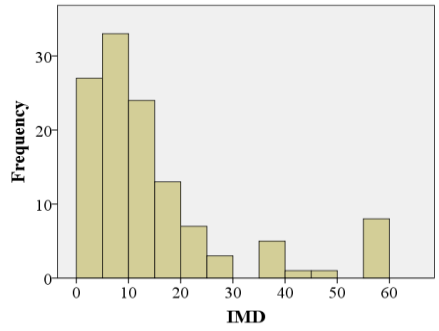
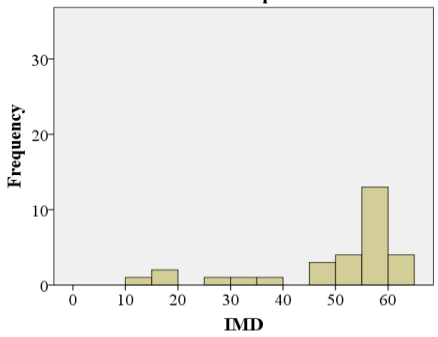
7.5 **Data analysis**

MLM analysis I: Identification of more effective and less effective high intensity practice

Patient outcome scores of high intensity practitioners (N = 29) were first inserted into a null single level regression model followed by a null multilevel model to test if the data could be better examined using a multilevel model. A conditional single-level regression model was then developed taking into account patient pre-treatment PHQ-9 scores. Models were tested for fitness with a linear function model and a quadratic function model, given that prior MLM analysis in Study III of patient data on low and high intensity practitioners yielded a quadratic function model. MLM analyses followed where models were tested for fitness allowing firstly for random intercepts followed by random slopes between practitioners.

Analyses were then carried out to determine the order in which to develop a final multilevel model to control for patient variables. The patient variables examined comprised employment status, ethnicity, functioning, index of multiple deprivation (IMD), age, and gender. Each patient variable was inserted in isolation into the conditional model to identify the individual contribution each variable made to the conditional multilevel model. Following the insertion of each patient variable, it was possible to determine an order in which to insert these variables into the multilevel model beginning with the variable with the largest magnitude of significant contribution to patient outcome followed by variables with a lower magnitude of significant contribution to patient outcome.

Table 7.1b: Mean case-mix for patient continuous variables for (n = 29) yoked high intensity practitioners

	Patients		Patient demographic per practitioner				
	n	%	Overall Mean	SD	Min Mean	Max Mean	
Age			42.45	3.33	36.48 (n = 89)	48.07 (n = 117)	 
- 15- 29	651	21.3					
- 30 – 49	1468	48.1					
- 50 – 69	838	27.5					
- 70 - 89	93	3.0					
Functioning (WSAS pre-treatment score)			18.24	3.02	14.29 (n = 24)	24.29 (n = 131)	 
Impairment with:							
- Subclinical psychopathology (0-9)	610	20.0					
- Less severe psychopathology (10-20)	1191	39.0					
- Moderately severe to severe psychopathology (> 20)	1249	41.0					
Index of Multiple Deprivation	5399	99.8	31.42	11.59	14.89 (n = 122)	49.92 (n = 30)	 
- IMD ≤ 25	1276	41.8					
- 25 < IMD ≤ 50	1093	35.8					
- 50 < IMD < 76	673	22.1					

To develop the final multilevel model, each variable was inserted in succession, first the variable itself followed by the interaction of the variable with pre-treatment scores followed by the next patient variable. At each stage of the model development, significance tests were conducted by inspecting model parameters and their standard errors. In addition, improved models were judged as meaningful if -2Log Likelihood ratio showed a significant reduction using a chi-square test on a probability of $p < .05$. Models were retained only if model parameters and -2LL reduction showed significant findings. All MLM analyses used Iterative Generalised Least Square (IGLS) estimation procedure.

The final multilevel model was used to create a residual or caterpillar plot that consisted of 90% confidence intervals of patients' post-treatment score residuals for each practitioner. From the plot, practitioners were identified as yielding more effective, effective, or less effective patient outcomes. Subsequent analysis examined and contrasted more effective and less effective practice only. More effective practice was characterised by practitioners whose post-treatment residual intervals fell below and separate from the residual mean, while less effective practice was characterised by practitioners whose post-treatment residual intervals were placed above and separate from the residual mean.

7.6 **Results from multilevel modelling analysis**

Patient post treatment scores of yoked high intensity practitioners (N = 29) could be analysed using MLM. A significant unconditional model, $\chi^2(1) = 59.34$, $p < .001$ indicated that there existed significant variability between practitioners with between therapist variance estimating 0.031 (SE = 0.010) and a patient variance estimating 0.660 (SE = 0.017). These values indicated an ICC of 0.045 or a therapist effect of 4.5%.

Patient initial scores were regressed against patient outcome scores using single-level regression analysis and identified the following relationship:

$$PHQLast = \beta_0 + \beta_1 PHQPre + \beta_2 PHQPre^2 + e_i$$

$$PHQLast = 2.179 + 0.991\ PHQPre + 0.114 PHQPre^2 + e_i$$

Patients with scores indicative of more severe depression show smaller degrees of improvement relative to patients with scores indicative of less severe depression. This pattern is consistent with the same association examined in Study III across patients of all practitioners.

The conditional model was fitted against a multilevel model that allowed for practitioner regression lines to vary by allowing random intercepts while maintaining a common slope. The new model showed a significant reduction in the -2LL ratio, $\chi^2(1) = 32.742$, $p < .001$, indicating that a multilevel model constituted a better model for the patient outcome scores relative to the single level model.

The analysis procedure fitted random slopes to the random intercept model. A random slope was fitted in succession for the linear coefficient followed by both the linear and quadratic coefficients of the conditional model. A significant model was obtained, $\chi^2(1) = 13.320$, $p < .05$ only when fitting a random linear slope coefficient as evident from $\mu_{1j.}$ The model in Figure 7.1 shows that practitioner regression curves have a mean intercept of 2.177 (SE = 0.027) with an estimated variance of 0.015 (SE = 0.005). Practitioners' regression curves show an average linear coefficient of 0.970 (SE = 0.034), which is estimated to vary about this mean by 0.008 (SE = 0.005). Intercepts and slopes show an estimated positive covariance of 0.012 (SE = 0.004) indicative of a 'fanning out' of practitioners' regression curves where larger intercept lines show steeper curves. As patients' pre-treatment depression scores increase the discrepancy of practitioners estimated patient post-treatment scores increases. Less effective practitioners show higher post treatment scores compared to more effective practitioners.

Figure 7.1: Conditional random intercept and random slope multilevel model

$$\text{LNphqLast}_{ij} = \beta_{0j} + \beta_{1j}(\text{LNphqPre-gm})\text{^}1_{ij} + 0.104(0.021)(\text{LNphqPre-gm})\text{^}2_{ij} + e_{ij}$$

$$\beta_{0j} = 2.177(0.027) + u_{0j}$$

$$\beta_{1j} = 0.970(0.034) + u_{1j}$$

$$\begin{bmatrix} u_{0j} \\ u_{1j} \end{bmatrix} \sim \text{N}(0,\ \Omega_u) \ :\ \Omega_u = \begin{bmatrix} 0.015(0.005) & \\ 0.012(0.004) & 0.008(0.005) \end{bmatrix}$$

$$e_{ij} \sim \text{N}(0, \sigma_e^2) \quad \sigma_e^2 = 0.419(0.011)$$

$$\textit{-2*loglikelihood} = 6044.221(3050 \text{ of } 3050 \text{ cases in use})$$

Patient characteristic variables were examined individually to ascertain the magnitude of each variable contribution in determining the order in which these variables would be inserted while developing a final multilevel model. Table 7.2 provides a summary of each variable contribution with its standard error and the respectively test value assessing the significance of the model (χ^2 test value).

Table 7.2: Results of the contribution of individual patient-characteristics

Order	Variable	β value (SE)	χ^2 –test value
1.	Employment status (being unemployed relative to not being unemployed)	0.2175 (0.0264)*	67.103**
2.	Ethnicity (being white relative to not being white)	-0.1066 (0.0389)*	21.406**
3.	Functioning	0.0098 (0.0016)*	38.317**
4.	IMD	0.0034 (0.0007)*	33.538**
5.	Age	-0.0032 (0.0009)*	14.168**
6.	Gender (being male)	0.0191 (0.0257)	5.075*

* p <.05

**p <.001

Based on the order of variable contribution (i.e., patient characteristic variables which make the largest to the smallest significant contribution), patient variables were inserted in the development of a final multilevel model. Patient gender was not included as this variable did not make a significant contribution to patient post-treatment scores.

A final multilevel model was developed across 14 stages. Each patient-characteristic variable followed by that patient-characteristic variable and its interaction with pre-treatment scores were inserted in succession. A detailed summary of findings across the stages of model development can be seen in Appendix XXI. Across all patient characteristic variables and interaction variables, patient unemployment, patient functioning, and patient index of multiple deprivation did not significantly moderate patient initial severity in the model. Furthermore, patient ethnicity did not significantly contribute to patient post-test scores as the variable on patient functioning was added to the model. The final model generated is shown in Figure 7.2. From the model, patient post-treatment outcome

scores are explained by estimates of patient initial severity, patient employment status, the interaction between patient ethnicity and their initial severity, patient functioning level, patient geographical index of multiple deprivation, patient age, and the interaction between patient age and patient initial severity.

Figure 7.2: Final random slope multilevel model of patient post-treatment scores with explanatory variables of patient-characteristics

$$\begin{aligned}\text{LNphqLast}_{ij} = {} & \beta_{0j} + \beta_{1j}(\text{LNphqPre-gm})\text{^}1_{ij} + 0.053(0.022)(\text{LNphqPre-gm})\text{^}2_{ij} + 0.184(0.027)\text{unemployed}_{ij} + \\ & -0.136(0.060)\text{white.(LNphqPre-gm)}\text{^}1_{ij} + 0.008(0.002)(\text{WSASpre-gm})_{ij} + 0.002(0.001)(\text{IMD-gm})_{ij} + \\ & -0.003(0.001)(\text{Age-gm})_{ij} + -0.003(0.001)(\text{Age-gm}).(\text{LNphqPre-gm})\text{^}1_{ij} + e_{ij}\end{aligned}$$

$$\beta_{0j} = 2.134(0.027) + u_{0j}$$

$$\beta_{1j} = 0.918(0.067) + u_{1j}$$

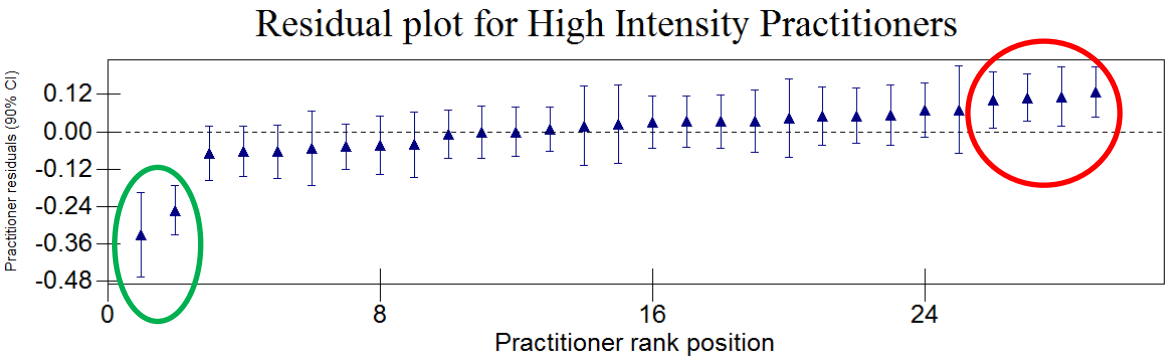
$$\begin{bmatrix} u_{0j} \\ u_{1j} \end{bmatrix} \sim \text{N}(0,\ \Omega_u)\ :\ \Omega_u = \begin{bmatrix} 0.012(0.004) & \\ 0.009(0.004) & 0.004(0.004) \end{bmatrix}$$

$$e_{ij} \sim \text{N}(0, \sigma_e^2) \quad \sigma_e^2 = 0.403(0.010)$$

*-2*loglikelihood* = 5895.991(3036 of 3050 cases in use)

A residual plot (see Figure 7.3) was generated from the final model (see Figure 7.2*)* containing 90% confidence intervals for each practitioner compared against an overall patient post-treatment mean (indicated by a horizontal dotted line across the plot).

Figure 7.3: Residual plot for High Intensity Practitioners



The plot identified two practitioners (circled in green) with below average residual post-treatment scores (i.e., more effective practice) and four practitioners (circled in red) with above average residual post-treatment scores (i.e., less effective practice). These practitioners constituted the practitioner sample for Study VII (n = 6), reported in the following section.

Study VII

Practitioners' themes unique to more effective practice

7.7 Introduction

Study VII sets out to identify themes unique to more effective practice, using the themes identified across all high intensity practitioners' accounts (n = 29) from Study V. Study VII aims to answer two questions: (1) what are the themes that differentiate *between* more and less effective practice? and (2) how do responses by more and less effective practice indicate personal aspects of resilience, empathy, and mindfulness? Study VII is consistent with Studies II and III, given that practitioner aspects are examined while contrasting between more effective and less effective practice. Study VII, however, differs from these studies (II and III) as it sets out to qualitatively identify indicators of practitioner aspects rather than examining quantitative personal aspect scores. Findings from Study VII may provide potential explanations of the quantitative personal aspect findings. The following sections set out hypotheses, using empirical evidence, as to how more effective practitioners may differ in their personal approach. In addition, hypotheses are provided as to how practitioners' resilience, empathy, and mindfulness may be indicated in responses provided by more and less effective practitioners.

7.7.1 Therapeutic relationship

Beutler and colleagues (2004) in their review of therapists' contribution to patient outcomes identified the therapeutic relationship as a consistent contributor. Meta-analyses have identified correlations between the therapeutic relationship and patient outcomes ranging from .22 to .28 (Del Re, Flückiger, Horvath, Symonds, & Wampold, 2012; Horvath, Del Re, Flückiger, & Symonds, 2011; Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). Robust associations have been established between alliance and outcome regardless of factors that include the type of therapy practiced, the alliance rater, alliance measure, and outcome rater (Horvath et al., 2011). Researchers have further examined the nature of practitioners' contribution specific to the alliance. That is, whether the contribution of the alliance towards patient outcome is dependent more on practitioners'

ability to form alliances or their patients' abilities (Baldwin, Wampold, & Imel, 2007; Crits-Christoph et al., 2009; Del Re et al., 2012; Dinger et al., 2008; Marcus et al., 2011; Zuroff, Kelly, Leybman, Blatt, & Wampold, 2010). Findings from meta-analyses are varied: Baldwin and Imel (2013) suggested that the primary source of variability may be found in the practitioner-patient interaction while Del Re et al., (2012) found that practitioners' contribution significantly predicted patient outcome.

This background of research on practitioner variability in relation to therapeutic alliance gives significance to the therapeutic alliance and the possible role of practitioners in facilitating the alliance. These findings support the hypothesis that thematic differences identified between more effective and less effective practitioners in Study V may be associated with a different emphasis placed on the alliance by practitioners. Identified themes may indicate that more effective practitioners attend more to working *with* patients, while less effective practitioners may place relatively less emphasis on working with patients.

7.7.2 **Self-awareness**

The state of being self-aware, may play a significant role in reducing risks associated with responding consistently with personal inclinations or motivations – that is, personal biases, anxiety, interest and/or personal agendas. A recently identified barrier to expertise is the inaccuracy of practitioners' self-appraisals (Tracey, Wampold, Lichtenberg, & Goodyear, 2014). People display self-assessment bias in over-rating their own skills relative to their peers and bias in over-rating patient improvement rates (Dunning et al., 2003; Grove & Meehl, 1996). Findings suggest that this bias applies to a large number of practitioners. The degree of inaccuracy was reflected in a study of 129 private practitioners (including 34 psychologists and 28 counsellors) where 25% of mental health professionals placed themselves at the 90th percentile while on average practitioners rated themselves at the 80th percentile relative to their colleagues (Walfish et al., 2012). In relation to the experience of negative emotions, Waller (2009) introduced the expression 'therapist drift' to describe practitioners who steer away from treatment protocols due to their personal cognitive distortions and emotional reactions. Regarding personal interests, Ricks (1974) in a seminal study of a psychiatrist labelled

'*supershrink*' drew comparisons based on case notes between more effective practice and less effective practice. Of the unique features identified, the less effective psychiatrist was found to engage with patients to bring out psychodynamic intricacies that were of interest to him rather than to focus on patients' day-to-day problems. These findings indicate that practitioners are not immune to risks associated with their personal biases and interests. If left unattended, practitioners may risk responding consistently with them. In similar fashion, it is likely that practitioners in the current sample face the same risks.

In addressing the final research question, practitioner aspects of resilience, empathy, and mindfulness were examined to identify indicators of these aspects within responses by more effective and less effective practitioners. Given that practitioners were not explicitly asked about their resilience, empathy, and mindfulness in the unstructured questionnaire, a more direct identification of these personal aspects was not possible. Practitioner aspects were hypothesised to be evident in the ways set out below.

7.7.3 **Resilience**

In Studies II and III, resilience was measured as a personal aspect that included factors of personal competence, high standards, and tenacity; trust in one's instincts, tolerance of negative affect, and strengthening effects of stress; positive acceptance of change, and, control (Connor-Davidson Resilience Scale; CD-RISC; Connor & Davidson, 2003). While practitioners' qualitative responses may not indicate the wide range of the abovementioned factors, it is likely that responses of more effective practitioners may indicate some of these factors. For example, in relation to nurturing the alliance, practitioners may indicate efforts to ensure personal competence and high standards to form and maintain an alliance with patients. Resilience in this instance may be indicated by practitioners persevering in their efforts while remaining in the present moment (i.e., resilience combined with mindfulness). Specific behaviours may include aligning oneself with patients and persisting in understanding patients, particularly when faced with stressors. These may be indicated in practitioner responses on how they work through professional self-doubt and/or challenging patients. It is also hypothesised that resilience alone may be indicated by practitioners perseverance

to practice in line with how they perceive as most appropriate to respond to patients (for examples whether to rely or treatment approaches).

7.7.4 **Empathy**

Studies I – III in the current thesis have examined the personal aspect of empathy as a unitary construct using the Basic Empathy Scale for Adults (BES-A; Carré, D'Ambrosio, Bensalah, & Besche, 2013; Jolliffe & Farrington, 2006). The measure includes factors of cognitive empathy and affective empathy that comprises both a person's emotional connection to another's experience and the extent to which a person is emotionally affected by another's experience. Similar to resilience, practitioners' responses are unlikely to indicate the details of the form of empathy they may experience in their practice. Responses, however, may indicate a practitioner's approach to understanding patients better or an openness suggestive of practitioners allowing themselves to be emotionally-connected with their patients in contrast to being emotionally affected by their patients' accounts when working with them.

7.7.5 **Mindfulness**

Studies II and III focused on mindfulness as "an open or receptive attention to and awareness of ongoing events, present events, and experience" (MAAS; Brown & Ryan 2003; Brown & Ryan, 2004). While mindfulness relates to the form rather than content of attention and awareness, indicators of being mindful may be seen where practitioners place an emphasis on remaining in the present-moment with their patients. Being present in the process of psychotherapy may incorporate attention to and awareness of dynamic elements present within a treatment session, comprising the patient and the practitioner themselves (e.g., self-awareness). It is important to further note that mindful self-awareness relates to having a motivation to remain in the present-moment and be simply aware of self in the present as opposed to engaging in further cognitive processing to explore, resolve or understand oneself (Franzoi, Davis, & Markweisse, 1990; Ingram, 1989).

It is hypothesised that mindfulness may be indicated by practitioners who emphasise remaining present with patients. By contrast, an absence, or lesser degree of mindfulness, may be

indicated by practitioners who show a relatively greater reliance on providing manualised treatment approaches. This is related to research evidence that, although limited, suggests that mindfulness is related to poorer patient outcomes for practitioners who deliver manualised treatments. The evidence indicates that mindfulness can potentially interfere with procedural memory involved when delivering manualised treatment (Stanley, Reitzel, Wingate, et al., 2006). It is hypothesised that an absence of mindfulness may be similarly indicated by practitioners whose responses indicate the possibility that they may be working with patients in line with personal biases, anxieties, and/or interests. This hypothesis arises from evidence by Levesque and Brown (2007) who found that individuals with higher levels of mindfulness (as measured on the MAAS) displayed more autonomously motivated behaviour regardless of their implicit motivations.

In summary, Study VII, hypothesises that unstructured responses by the more effective compared to the less effective practitioners may be characterised by a greater emphasis on the therapeutic or working alliance and also by indicators of mindfulness and resilience. The latter finding is anticipated as being consistent with findings in Studies II and III where more effective practitioners displayed significantly higher levels of combined resilience and mindfulness in contrast to less effective practitioners.

7.8 **Design**

The template established in Study V is used to identify thematic differences between more effective and less effective practice (n = 6). Although the researcher was blind when identifying themes that contributed to the final template, qualitative analysis in the current study was conducted unblinded. While interpretations are subject to researcher bias, unblinded analyses of practitioner quotes enabled the researcher to identify consistent differences between more and less effective practitioners. Differences are examined by studying qualitative responses provided by the respective practitioners. These responses are studied and presented with three purposes: first, to illustrate the identified thematic differences; second, to see how the thematic differences relate to the hypothesis described at the start of the current chapter on practitioners' contribution to therapeutic alliance; and third, to identify indicators of practitioner aspects of resilience, empathy, and mindfulness.

7.9 **Measure - Unstructured questionnaire entitled: "Reflecting on me as a person and as a practitioner"**

The questionnaire comprised 16 questions within 4 sections as follows:

i) Section 1: What practitioners report that they personally bring to their professional practice (e.g., "Please list 5 words you feel describe you as a person in relation to your practice");

ii) Section 2: Practitioners' accounts of personal life influences on their professional practice (e.g., "What are the significant life experiences or relationships in your personal life which have been influential in developing and/or nurturing what you now bring to your practice?");

iii) Section 3: Practitioners identified professional life influences of their professional practice (e.g.,, "Since you started your career as a practitioner, what are the significant experiences within your professional practice which have been influential in developing and/or nurturing what you bring to your practice?"); and

iv) Section 4: Practitioners' perspective of their wellbeing in relation to their professional practice (e.g., "How does your wellbeing impact on the professional service you deliver?").

Specific questions for the questionnaire were adapted from Jennings and Skovholt's (1999) interview questions for 'master' therapists. One question associated with professional self-doubt was adapted from the Development of Psychotherapists Common Core Questionnaire (DPCCQ: Nissen-Lie at al., 2013; Orlinsky et al., 1999). Questions were included to assess practitioners' perspectives on their retrospective career development as well as their currently experienced career development as indicated by Orlinsky and colleagues (1999) in a extensive study which examined determinants of the professional development of psychotherapists. Two questions covered assessment of (a) professional self-doubt and (b) practitioners' response to challenging patients. These questions aimed to identify more apparent differences between more and less effective practice as suggested by research findings. These findings indicated that professional self-doubt is related to early working alliance (Nissen-Lie, Monsen, & Rønnestad, 2010), patient outcome (Nissen-Lie, Monsen, Ulleberg, & Rønnestad, 2013), and that differences in therapists' effectiveness are larger when examining practitioners' treatment of more severe patients (Saxon & Barkham, 2012). The full content of the unstructured questionnaire is

presented in Appendix XVII. In Study VII only responses of more effective and less effective practice were examined.

7.10 Template Analysis I: Identification of themes that differentiate more from less effective practice

Study VII builds on the Template Analysis conducted in Study V (King, 2004, 2012). The established template (see Table 7.3) was used to identify a further template that illustrates thematic differences between more effective and less effective practice. Table 7.3 displays a template of practitioners' qualitative responses to the unstructured questionnaire described above. The template comprises three levels of related themes. The higher order theme reflects the broad categories of practitioners' responses followed by lower order themes that relate to specific questions that practitioners provided answers to followed by subthemes that indicate the salient categories identified based on practitioners responses. The number of practitioner responses for each subtheme is indicated as well as the proportion these represented out of the sample of yoked high intensity practitioners (n = 29). Of the information provided, Table 7.3 indicates that most practitioners (26, 89.7%) reported having a unique personal characteristic, a majority of practitioners (22, 75.9%) reported having attended personal therapy beyond that required as part of their training, and the primary motivations to become a therapist included altruistic reasons (16, 55.2%) and personal interest in the subject (16, 55.2%).

Responses provided by practitioners on the higher order theme of professional life reflected three salient subthemes pertaining therapeutic skills, patients and self (i.e., practitioners themselves) for lower order themes of Retrospective Professional Development (lower order theme 8) and Challenging patients (lower order theme 12).

Table 7.3: Template of qualitative responses of high intensity practitioners (n = 29):

Higher order themes	Lower order themes	Practitioner response-indicated subthemes	Number	Proportion
I. Self-View	1. Distinguishing personal characteristic	- Yes	26	89.7
		- No	3	10.3
II. Personal Life	2. Life experiences	- Negative	26	89.7
		- Positive	20	69.0
	3. Personal reflection		21	72.4
	4. Personal Therapy	- Yes	22	75.9
		- No	4	13.8
	5. Influence of personal therapy	- Technique awareness	7	24.1
		- Sensitivity to patient process	16	55.2
		- Self-awareness	7	24.1
	6. Reason for becoming a practitioner	- To help	16	55.2
		- Interest	16	55.2
		- Awareness that one possesses ability to help	7	24.1
		- Circumstance	14	48.3
III. Professional Life	7. Historical influences	- All sources except patient (e.g., training, supervision, reflection)	24	82.8
		- Patient – general influence	21	72.4
		- Patient – elaborate influence	5	17.2
	8. Retrospective Professional Development (PD)	- Skill development	21	72.4
		- Patient-sensitivity	13	44.8
		- Self-awareness	23	79.3
	9. Current (PD)	- Yes	29	100.0
	10. Professional self-doubt	- Yes	29	100.0
	11. Professional self-doubt response	- Therapeutic skills	26	89.7
		- Patient engagement	12	41.4
		- Patient engagement (anxious)	2	6.90
	12. Challenging patients	- Therapeutic skills	22	75.9
		- Patient-sensitivity	24	82.8
		- Self-awareness	20	69.0
IV. Wellbeing	13. Impact	- Energy and concentration	29	100.0
	14. Wellbeing activities	- Yes	29	100.0
	15. Mindfulness-related activities	- Yes	24	82.8
		- No	5	17.2
V. Personal approach (aggregate theme)	16. Combined "Retrospective PD" (8) & "Challenging patients" (12).	- Therapeutic skills	18	62.1
		- Patient-orientation	12	41.4
		- Self-awareness	17	58.6

Most practitioners reported that since the start of their careers they have developed in respect to their therapeutic skills (21, 72.4%) and their self-awareness (23, 79.3%). Compared to this, when faced with a challenging patient, most practitioners reported drawing on their patient-sensitivity (24, 82.8%), together with their therapeutic skills (22, 75.9%) and self-awareness (20, 69.0%). These values may highlight a significance practitioners provide to patients when faced with a challenging patient.

The analysis required identifying themes that differed between practitioners grouped as more effective and practitioners grouped as less effective. Higher order themes were retained in the template only where lower order sub-theme differences were identified between more effective and less effective practitioner groups. The criterion for differences was that both of the two more effective practitioners showed a similar lower order sub-theme and where a minimum of two of the four less effective practitioners showed an absence of that sub-theme or showed a different category of that lower order sub-theme. Quotes of practitioner responses are provided and interpreted to illustrate the identified thematic differences, how thematic differences relate to practitioners contribution to therapeutic alliance, and to identify indicators of practitioners' aspects of resilience, empathy, and mindfulness.

7.11 Template Analysis II: Identification of consistent themes within more and less effective practice

An aggregate theme was identified by combining lower order themes of "Retrospective Professional Development" and "Challenging patients" which shared similar subthemes related to practitioners' therapeutic skills, patient-sensitivity, and self-awareness. Analysis reported in this section sought to identify more consistent personal approaches within practitioners and how these differed between more effective and less effective practice. Given Template Analysis II comprises case-level findings, interpretations are provided on all six practitioners (i.e., the two more effective and the four less effective). Findings are presented with practitioner quotes. An additional relevant quote included in this analysis pertains to practitioners' descriptions of a distinguishing personal

characteristic of their practice, a response provided to Question 3 of the unstructured questionnaire: "Is there one distinguishing personal characteristic of your practice?"

7.12 Results I: Findings on the identification of themes that differentiate more from less effective practice

Practitioner quotes are provided with alphabetical labels for respective practitioners (i.e., A and B for more effective practitioners and W–Z for less effective practitioners). To ensure anonymity, all the practitioners in this analysis are referred to as female practitioners. Table 7.4 shows the template comparing more effective (n = 2) and less effective practice (n = 4) groups. Thematic differences were identified in specific lower order themes within the higher order theme of "Professional Life". The lower order themes related to practitioners' retrospective professional development, practitioners' response to self-doubt and practitioners' response to challenging patients.

Table 7.4: Higher and lower order themes and sub-themes for more effective and less effective practice

Higher order themes	Lower order themes	Practitioner grouping	
		More effective practice	Less effective practice
III. Professional Life	8. Retrospective Professional Development	- Significance given to development of self-awareness and patient sensitivity	- Significance given to development of Therapeutic skills
	11. Response to Self-doubt	- Significance given to patient engagement	- No significance given to patient engagement - Anxious patient engagement indicated
	12. Response to Challenging patients	- Significance given to being self-aware	- No significance given to being self-aware

Thematic differences were observed consistently across the two more effective and two of the less effective practitioners. These were practitioners identified on either end of the residual plot of the multilevel model derived in Study VI (Figure 7.3).

7.12.1 **Lower order theme 8: Retrospective professional development**

Interpretation on thematic differences

For the current lower order theme, differences were identified across all respective practitioner sub-themes (i.e., skill development, patient-sensitivity, and self-awareness). Responses by both more effective practitioners indicated that since starting their career, they have developed more in recognising the presence of the patient and recognising the importance of how they relate to themselves - by being more comfortable with self or less preoccupied with self. In contrast, the less effective practitioners provided no explicit mention of the parties involved in therapy when considering how they have developed since starting their career. This is notable given 44.8% of high intensity practitioners had commented on patient-sensitivity and/or 79.3% of the same commented on being self-aware (see Table 7.1). While the question queried what practitioners "personally bring" to their practice, responses by less effective practitioners did not address personal contributions in themselves but rather indicated personal relatedness to skills and approaches. Responses of less effective practitioners suggested that they recognize being more self-confident and flexible with their skills and the application of therapy than when they began their career.

Interpretation of thematic differences in respect to alliance

These thematic differences may reflect variability in how practitioners place significance on the therapeutic alliance. Both more effective practitioners indicated that it is noteworthy to comment on their development in relation to how they approach patients while two of the four less effective practitioners did not make explicit mention of how they have developed in respect to their dealings with patients but rather how they have developed in relation to their skills, treatment models, and protocols.

Interpretation of resilience, empathy, and mindfulness

Both responses of practitioners A and B primarily indicated combined aspects of resilience and mindfulness. Both practitioners A and B reported having developed and being able to maintain a standard conducive to patients, whether it was to be comfortable with their self in order to be more

empathic with patients (A) or to remain less preoccupied with self and focused on the patient (B). Mindfulness was indicated in how both practitioners A and B mentioned that they had developed using awareness of self to attend to patients.

The following are responses provided by practitioners A and B:

"More confident, resilient, able with greater self-awareness, which enables me to be more empathic and accepting of others. The more comfortable I am with myself, the more comfortable I am with other people." (A: 1)

"Less anxious about my performance 'it is less about I, me, mine, more about working with what is presented' as best I can. Increased understanding of life" (B: 1)

Responses provided by less effective practitioners include:

"More confident in my skills. More willing and able to adapt therapy. Try things out more. More flexible with ..... models and treatment protocols." (Y: 1)

"Better skilled in ...(manual). More experience with models." (Z: 1)

7.12.2 **Lower order theme 11: Response to self-doubt**

Interpretation on thematic differences

For the lower order theme of "Professional self-doubt response", differences were identified across two sub-themes (i.e., patient engagement and anxious patient engagement). Practitioner responses suggested that when they experience professional self-doubt, differences in effectiveness emerged with respect to whether practitioners engaged with patients and how they engaged with patients. Practitioners A and B indicated patient engagement involving *"exploration with", "review and reflection…with"* the patient when experiencing self-doubt. Contrary to this account, practitioners Y and Z either did not mention a response that involved engaging their patient in relation to their self-doubt or practitioners W and X indicated an anxious manner of engagement with their patients.

Interpretation of thematic differences in respect to alliance

Responses by practitioners A and B suggested the active application of a working alliance. These practitioners indicated that their patients have a role to play in relation to practitioners' experiences of self-doubt. While responses by practitioners W and X similarly indicated practitioners drawing on patients' perspectives, their responses also indicated a notable degree of uncertainty where practitioners foresee an option of patients ceasing therapy either by droping out or being referred on. This observation of practitioners W and X suggests that while they may perceive their role as the primary role in providing therapy, they may consider patients on the other hand as having a relatively minor role in the alliance, particularly concerning how patients can influence the course of therapy. In contrast, responses of practitioners Y and Z do not indicate explicit attempts to engage with patients when dealing with self-doubt.

Interpretation of resilience, empathy and mindfulness

All practitioners indicated a response in addressing their experiences of professional self-doubt. However, the response of practitioner A suggested a trust in her instincts and she appeared to display a strengthening effect in relation to the stressor where she *'keeps trying'* with the patient. Practitioner A's response also indicated empathy in "trying to *understand*" the patient and mindfulness, where her response suggested that she would need to remain in the present moment in order to follow attentively her patient's experiences.

The following are responses provided by practitioners A and B:

"Yes, I keep trying to explore their world with them and keep trying to understand their move." (A:2)

"Yes, take to supervision, review and reflect on treatment with client, examine current relationship and conceptualisation treatment approach." (B: 2)

The following are responses provided by practitioners W, X, Y and Z:

"I experience lots of these occasions! Sometimes I say to myself "I don't have to do anything, I just have to be here." Sometimes I ask the client "how could I be more helpful?" Regularly take the

problem to supervision. I often feel ambivalent, offering the client more therapy, but feeling relieved if they drop out." (W: 2)

"Yes, of course! In session: inwardly panic (!) feel anxious, outwardly slow things down a bit, find out more from the patient ask more open questions, if appropriate verbalise if I'm not clear/sure about the next step, check consent to discuss in supervision, put on agenda for next session (if a specific item) / issue). Outside of session: reflect on the case alone/with supervisor/peer, seek further info (literature, maybe even training if long term need to develop skills). If (technique) deemed to be unhelpful, refer patient on." (X: 2)

"Yes. Take to supervision. Go over similar successful cases. Talk to peers. Use ..(technique).. on myself." (Y: 2)

"Yes, be honest, take to supervision, study." (Z: 2)

7.12.3 **Lower order theme 12: Response to challenging patients**

Interpretation on thematic differences

For the lower order theme examining practitioners' responses to challenging patients, differences were identified across one practitioner sub-theme (i.e., self-awareness). Responses by practitioners A and B indicated significance given to how they related to themselves (i.e., being self-aware). Accounts showed that practitioners utilised this behaviour in order to manage how they believed they needed to be present with a challenging patient (e.g., whether to maintain a certain level of calm or be aware of personal limitations). By contrast, practitioners Y and Z, however, did not note about being mindful of self. Rather, attention was given to the application of interpersonal skills and/or patient management.

Interpretation of thematic differences in respect to alliance

The thematic difference for self-awareness suggests how this awareness may be necessary when attending to the alliance with challenging patients. Practitioner A indicated that she aligns herself with her patient while practitioner B's response includes a re-establishing of respect and listening to her patient. Both practitioners appear to regulate their roles, allowing the patient to take

on a more central role. In contrast, both practitioners Y and Z provided relatively less significance to the challenging patient. Challenging patients of practitioners Y and Z appeared to be recipients of case-management and interpersonal skills.

Interpretation of resilience, empathy and mindfulness

Practitioners A and B set out to maintain a level of personal competence which they indicated is necessary for the challenging patient. The practitioners' efforts involve regulating a state of being in the present moment with patients, either being calm and reflective or respectful and attentive. These suggest that responses of practitioners A and B both display a combination of resilience and mindfulness.

Responses of more effective practitioners include the following:

"Stay very calm and be reflective. Stay with how the client wishes to be." (A: 3)

"Using experience of past difficult clients/presentations re-establish basic conditions; respect, listening, realise my own limitations and be flexible with approaches." (B: 3)

In contrast, responses of less effective practitioners are as follows:

"Depends on the challenge and the client! Might adapt: model/formulation, treatment, number of sessions, length of sessions, interpersonal style, content of sessions." (Y: 3)

"flexible, collaborative, discuss openly." (Z: 3)

7.13 Results II: Findings on the identification of consistent themes within more and less effective practice

The current section reports on the two more effective and four less effective practitioners at a case level. It presents practitioners' description of their distinguishing personal characteristic and examines consistent themes following from the established template based on responses from all practitioners *(Table 7.1, higher order theme V: Personal approach)*.

7.13.1 **More effective practitioner A**

Practitioner A sees *"being open"* as being central to her relationship with patients and relationship with self. Furthermore, relationship with self is seen as important in influencing her relationship with patients. Practitioner A consistently gives significance to both self and patient and responses consistently indicate personal aspects of resilience and mindfulness. Accounts of trusting in her instincts and the drawing of strength from stressors indicate resilience by responding in a concerted manner, and maintaining personal standards when relating to patients. Mindfulness is indicated by her awareness of self and maintaining certain states of being present (e.g., calm and reflective). Resilience and mindfulness appear to play a combined role as responses suggest effort placed in maintaining a mindful stance.

Response provided regarding having a distinguishing personal characteristic:

"Being open to all experience other people bring and being open to all aspects (that I am aware of) in myself."

Response provided regarding one's own retrospective professional development:

"More confident, resilient, able with greater self-awareness, which enables me to be more empathic and accepting of others. The more comfortable I am with myself, the more comfortable I am with other people." (A: 1)

Response provided on how one adapts when faced with a challenging patient:

"Stay *very calm and be reflective. Stay with how the client wishes to be."* (A: 3)

7.13.2 **More effective practitioner B**

Practitioner B places significance on patients' roles in contributing towards their improvement. This is consistently reflected on in accounts of her retrospective development where she understood practice to be less oriented to her personal preferences and more oriented towards her patients' difficulties. This is extended to working with challenging patients where she realises personal limitations and alternatively draws on past patient experiences, re-establishes a state of

being, which provides patients with a more central role by being respectful and attentive. Responses of practitioner B indicate a combination of resilience and mindfulness; resilience in maintaining personal standards of being attentive to patients which is enabled by being mindful of self (i.e., not to be self pre-occupied and to be aware of personal limitations).

Response provided regarding having a distinguishing personal characteristic:

"Honouring the clients experience and innate ability to overcome difficulties."

Response provided regarding one's own retrospective professional development:

"Less anxious about my performance 'it is less about I, me, mine more about working with what is presented' as best I can. Increased understanding of life" (B: 1)

Response provided on how one adapts when faced with a challenging patient:

"Using experience of past difficult clients/presentations re-establish basic conditions; respect, listening, realise my own limitations and be flexible with approaches." (B: 3)

7.13.3 **Less effective practitioner W**

Practitioner W reports that she has improved in her understanding of patients' emotional experiences of their depression and/or anxiety and suggested that she can listen more effectively. Although she reports having improved in these ways, she expressed a significant deal of apprehension when faced with a challenging patient.

Responses by practitioner W appear consistent in suggesting an anxious manner while working with patients. This is reflected for example in her account of having a unique personal characteristic *"even to please"* others and *"try(ing) very hard not to be, or even to feel, defensive"* and *"try(ing) to relax"* while faced with a challenging patient. Practitioner W displays a degree of resilience in her multiple efforts to *try* for example when faced with a challenging patient. In context of her expressed apprehension, many of her efforts however suggest a focus on reducing her anxiety. This is reflected in the many questions she considers to help her adapt. Perhaps practitioner W's focus on helping the patient experience herself as trustworthy may be functional in reducing her

anxiety. Gaining the patients trust appears to be primary, with no explicit mention however of the primary goal for patient improvement.

There is an absence of mindfulness suggested. Practitioner W states that she knows what her patients' *"can expect to feel"* and listens in a *"more focused way"*. These could be interpreted as her presuming to understand patients and selectively attending to patients. Features that may not motivate practitioner W to remain in the present moment with patients, as there may be little need to seek a comprehensive understanding of patients. In addition, practitioner W also reports trying *"very hard…not to feel defensive"* this implies effort and further cognitive processing involved in dealing with her personal apprehension. This is in contrast to a mindful observation/awareness of her anxiety that facilitates a psychological freedom to be attentive to the present moment.

Response provided regarding having a distinguishing personal characteristic:

"Perhaps a desire to help, even to please."

Response provided regarding one's own retrospective professional development:

"I bring a much greater understanding, knowing much of what people with depression, anxiety, history of abuse etc. can expect to feel. I can listen in a more focused way to what is unique to each client." (W: 1)

Response provided on how one adapts when faced with a challenging patient:

"I try to ask myself, and if possible ask the client, what is going on for them? I try very hard not to be, or even to feel, defensive. I might slow down, or be less active in my interventions. I try to ask myself what this client needs to be able to experience me as trustworthy, and I try to relax." (W: 3)

7.13.4 **Less effective practitioner X**

Responses from practitioner X suggest a person who is resilient as indicated by her personal description of uniquely being *"reluctant to 'give up' in the face of complex challenges"*. She reports that she has developed professionally in relation to her skills and is more confident. She indicates that she better able to decide when to end treatment, and better in managing her personal self-care while

working with patients. Her confidence was conveyed in how she adapts when faced with a challenging patient.

Emphasis given to dealing with her patients' emotions, her own emotions and general impact of clinical work on her emotional and physical wellbeing, could raise interpretations in relation to practitioner X's empathic manner. Her approach to *"manage"* her own emotions, suggest a top-down processing of affective empathy where perhaps practitioner X may be less emotionally connected to patients by self-regulating in response against patients' emotions (i.e., less emotional connection).

Although practitioner X gives consideration to her patients, these appear to be related to how she manages them. From managing the length of treatment duration, containing patients' emotions and managing her own emotions. Responses do not imply a relationship of working together with the patient. It may be interpreted that when practitioner X reports getting *'alongside'* if faced with an openly hostile patient, the use of quotation marks may suggest that she may pretend to get alongside the patient. Practitioner X's confidence is indicative of a biased perspective that may play a role in reducing her motivation to learn from patients to improve her practice. Responding to patients in line with existing bias precludes responding autonomously to present moment stimuli. There is an absence of mindfulness indicated in light of limited suggestion of practitioner X being in the present moment while she remains confident of the therapeutic value of her practice.

Response provided regarding having a distinguishing personal characteristic:

"Reluctance to 'give up' in the face of complex challenges (clinical)."

Response provided regarding one's own retrospective professional development:

"More skilled. More confident. Less inclined to prolong therapy when it's not working for the patient. Better able to manage my own emotions, which has made me (in some ways) more able to contain those of my patients. Has also meant that the clinical work is less draining for me emotionally and physically." (X: 1)

Response provided on how one adapts when faced with a challenging patient:

"Depends on the nature of the challenge. In the case of open hostility, I would seek to listen to the reasons for their anger (take more time over this) and to get 'alongside' the patient (metaphorically) rather than confront / challenge them. If complexity, take longer over each stage of therapy, take more time to form a firm alliance." (X: 3)

7.13.5 **Less effective practitioner Y**

Practitioner Y reports that she has developed in her skills and is adaptive in applying these to when providing therapy. Practitioner Y reports having no distinguishing personal feature related to her practice. Under the assumption that individuals are unique, her responses suggest a limited consideration of self. This is to a degree reflected in her retrospective professional development and the current approach towards challenging patients where responses more consistently attend to therapeutic skills and how these can be therapeutically applied to patients. Responses of practitioner Y suggest little application of mindfulness as she shows a relatively stronger reliance on therapeutic skills. This is in contrast to being in the present moment to facilitate building on alliance which could also be relied on as patient and practitioner work together. Practitioner Y may display resilience in her application of treatment models and approaches.

Response provided regarding having a distinguishing personal characteristic:

"No (distinguishing personal characteristic of my practice)."

Response provided regarding one's own retrospective professional development:

"More confident in my skills. More willing and able to adapt therapy. Try things out more. More flexible with ..... models and treatment protocols." (Y: 1)

Response provided on how one adapts when faced with a challenging patient:

"Depends on the challenge and the client! Might adapt: model/formulation, treatment, number of sessions, length of sessions, interpersonal style, content of sessions." (Y: 3)

7.13.6 **Less effective practitioner Z**

Practitioner Z reports that she has developed in respect to her therapeutic skills since the start of her career. Responses reflect consistent attention given to therapeutic skills with relatively limited attention indicated in association with patient interaction. Practitioner Z describes herself as uniquely being thorough in her practice. This is supported by her accounts that she has developed better skills related to the treatment approach applied with more experience. Responses suggest a degree of resilience associated with being 'thorough' and 'better skilled'. No expression is provided on self-awareness, nor do responses indicate that attention to the patient is noteworthy. Perhaps practitioner Z's responses reflect a belief in growing competence and skill which may minimise motivation to be aware of herself and attentive to her patient.

Response provided regarding having a distinguishing personal characteristic:

"thorough"

Response provided regarding one's own retrospective professional development:

"Better skilled in …(manual). More experience with models." (Z: 1)

Response provided on how one adapts when faced with a challenging patient:

"flexible, collaborative, discuss openly." (Z: 3)

In considering practitioners' personal approaches to their practice, findings are consistent with the hypotheses that practitioners who are more reliant on treatment approaches and who work in line with personal biases and anxieties may utilise mindfulness to a lesser degree. Responses from practitioners Y and Z suggested a greater reliance on techniques and did not explicitly refer to being responsive depending on the patient at the time. Responses from practitioner W suggested a practice that was influenced by personal anxiety, and responses of practitioner X suggested a practice where treatment was provided confidently under a biased positive self-appraisal.

Final template comparing unique themes between more effective and less effective practice

Table 7.5 reflects the final template model derived from the original template from Study V applied to only Practitioners A and B versus Practitioners W – Z. Overall results indicate that more effective practice uniquely gives priority to the patient and practitioner present in therapy. In contrast, less effective practice uniquely gives priority to therapeutic skills with a notable absence of attention given to the patient and/or the self of the practitioner. Where less effective practice gives more attention to the patient and/or the self, the presence of personal biases and anxiety was indicated.

Table 7.5: Final higher and lower order themes and personal aspect indicators for more effective and less effective practice

Higher order themes	Lower order themes	Practitioner grouping	
		More effective practice	Less effective practice
III. Professional Life	8. Retrospective Professional Development	- Significance given to development of self-awareness and patient sensitivity - *Indications of R&M*	- Significance given to development of Therapeutic skills
	11. Response to Self-doubt	- Significance given to patient engagement - *Indication of REM*	- No significance given to patient engagement - Anxious patient engagement indicated
	12. Response to Challenging patients	- Significance given to being self-aware - *Indications of R&M*	- No significance given to being self-aware
V. Personal approach (across practitioners)	16. Combined lower-order themes of "Retrospective Professional Development" & "Challenging patients"	- Attention given to self awareness and patient awareness - *Indications of R&M*	- Attention given to therapeutic skills - *Indication of R*

In summary, across all three personal aspects, combined resilience and mindfulness was evident as being unique to more effective compared to less effective practice. This however appeared to hinge on the presence of mindfulness as a personal aspect that informed resilient effective therapeutic responses. It appeared that resilience alone (uninformed by mindfulness) did not facilitate

effective practice; however, in instances of practitioners' personal biases and anxiety, it may have magnified practitioner responses congruent to these biases and anxiety. In respect to empathy, there was little evidence in responses relating to empathy, partly because questions did not specifically query on practitioners responses to patients' emotions. More effective practitioner A did however express in her response (A: 2) a desire to understand patients and less effective practitioner X indicated a possible stance of being less emotionally connected with patients (X: 1).

7.14 **Discussion**

Study VI utilised MLM to identify more and less effective high intensity practice. Within the sample of high intensity practitioners and given the variability between practitioners' respective patient demographics, the multilevel model controlled for variations between practitioners' patient case-mix. These comprised patients' initial depression severity levels, initial functioning levels, age, ethnicity, employment status, and geographical deprivation. The sample of practitioners identified from Study VI (n = 6) comprised practitioners who represent more and less effective practice in the broader population of practitioners. Findings on these practitioners are generalisable to relatively older-aged practitioners with a mean age of 51 who treat adult patients with more severe or clinical depression.

Study VII examined thematic differences between more effective and less effective practice identified in Study VI. In considering the *background* of high intensity practice, no differences were identified between the background of more effective and that of less effective practice. Both practitioner groups displayed comparable accounts of positive and negative influencing events in their personal lives. Practitioner groups did not differ on whether they received personal independent therapy or not. Also no difference was identified in respect to practitioners expressed motivation for becoming a therapist. The findings suggest that regardless of practitioners' personal background and personal motives, practitioners delivered effective practice.

Differences between more effective and less effective practice were observed in practitioners' accounts of their *professional lives*. Both practitioner groups consistently gave attention to different elements involved when engaging in treatment. These elements comprised the patient, therapeutic

skills, and/or the practitioners (themselves). More effective practitioners considered how they related with the patient and themselves while less effective practitioners considered their application of therapeutic skills. Practitioners' areas of attention, i.e., to skills or parties involved in therapy were consistent across different domains of their professional lives, suggesting a possible enduring personal approach towards their practice. More effective practitioners perceived that they developed in being more patient-sensitive and self-aware, which appeared to lead into how they approached their current practice, particularly when seeing challenging patients. This was in contrast to less effective practitioners who reflected a historical development of therapeutic skills/models and continued confidence and skill in applying these techniques. Less effective practitioners also appeared to respond to patients in a less autonomous manner consistent with their personal biases and/or anxieties rather than responding while being informed by the present moment.

As a whole, the thematic differences reflect differences in practitioners' contribution towards the therapeutic alliance. The findings give support to research suggesting that the therapeutic relationship significantly contributes to patient outcome (Del Re et al., 2012; Horvath et al., 2011; Horvath & Symonds, 1991; Martin et al., 2000) and that practitioners vary in their contribution towards the therapeutic alliance (Baldwin & Imel, 2013; Baldwin et al., 2007; Crits-Christoph et al., 2009; Del Re et al., 2012; Dinger et al., 2008; Marcus et al., 2011; Zuroff et al., 2010). Accounts of more effective practitioners compared to less effective practitioners suggested deliberate efforts to remain receptive and responsive to patients as opposed to being skilled in the application of theoretical models or approaches. While the analyses conducted examined unique relative differences between the more effective and less effective practitioner groups, it is important to note that the findings do not suggest that therapeutic skills and approaches are not essential. Rather, they suggest that the practitioner groups differed in what they indicated was noteworthy or important. Therapeutic skills are necessary but may not be sufficient for the delivery of more effective practice if primary attention is not provided to the patient. Attention provided to the patient appeared to differ between more and less effective practice. The former sought to connect with the patient as a person, while the latter appeared to treat the patient as a subject with depression. More effective practice appeared to

provide relatively more consideration of patients' capacity to influence their own improvement and allowed patients scope to influence their improvement. In contrast less effective practice appeared to provide more consideration on the skills applied, the management of patients, or responded consistent with existing biases and/or anxieties.

In considering practitioner aspects of resilience, empathy, and mindfulness, there was evidence on the unique contribution of combined resilience and mindfulness and mindfulness towards more effective practice. Practitioner responses provided lesser evidence on empathy, however this was indicated in responses of one more effective practitioner and a less degree of emotional connection was indicated in responses on one less effective practitioners. Personal aspects appeared to be applied in relation to the therapeutic alliance. While accounts by more effective practitioners indicated attention given to patients could suggest empathy, practitioner accounts further included self-awareness. More effective practitioners appeared to endeavour to remain in the present-moment addressing dynamic elements within a treatment setting. These included the patient and the practitioner, who are dynamic by virtue of having varying day-to-day personal experiences and stressors and varying personal biases and/or interests.

8 Chapter 8

Discussion

The current thesis sought to understand the contribution of practitioner variability to patient outcome within an IAPT service delivery system. In particular, work focused on the contributions associated with practitioners' personal aspects of resilience, empathy, and mindfulness and the extent to which these aspects may explain how some practitioners yield consistently better patient outcomes compared to practitioners who deliver relatively poorer patient outcomes.

The present discussion comprises three main sections. The first sets out to summarise the main findings from each of the Studies I – VII. The second section addresses the more substantive task of integrating the key findings in the context of the issues raised in the Chapter 1 (i.e., Introduction). This section considers the main themes related to practitioner variability, personal aspects, and associations with patient severity. The third section discusses implications for training and professional practice as well as for research in practice settings involving the engagement of practitioners. The section – and thesis – concludes with a discussion on the limitations of the current research and considerations for future research.

8.1 Study specific findings

8.1.1 Study I - Quantitative findings relating to practitioners' personal aspects

Study I examined the personal aspects of resilience, empathy, and mindfulness that practitioners bring to their practice. Results showed a positive association between resilience and mindfulness amongst counsellor practitioners. When counsellors and CBT therapists were grouped together as high intensity practitioners, a relatively lower significant positive association was found. The association was not found amongst PWPs and CBT therapists alone or when PWPs and CBT therapists were combined in relation to their delivery of CBT-oriented treatment.

For each respective personal aspect, differences between practitioners' mindfulness and combined resilience and mindfulness were found to consistently occur beyond chance alone. This finding held when practitioners were compared in terms of their professional roles, the level of treatment intensity

provided, and the theoretical orientation they delivered. Counsellors appeared to display higher levels of mindfulness and combined resilience and mindfulness, followed by CBT therapists and PWPs. In a related manner, high intensity practitioners (CBT therapists and counsellors) displayed relatively higher levels of these personal aspects compared to PWPs. Similarly, counsellors displayed relatively higher levels of mindfulness and combined resilience and mindfulness compared to CBT-oriented practitioners. No differences were indicated between practitioners on empathy. In respect to resilience, high intensity practitioners were found to display significantly higher levels of resilience compared to low intensity practitioners. When considering resilience scores across practitioners' roles, both counsellors and CBT therapists appeared to display relatively higher levels of resilience compared to PWPs.

While these findings may be explained by professional socialisation, socialisation to professional roles may also be moderated by practitioners' age. This is a possible explanation as examination of practitioner demographics identified systematic differences in the age of the various practitioner groups. Counsellors were significantly older than CBT therapists by a mean difference of over 10 years and significantly older than PWPs by mean difference of over 20 years. While analyses revealed no association between each personal aspect and practitioner gender and age, the relationship between mindfulness and age approached significance. Arguably practitioner age may moderate effective practice for the treatment of patients with relatively more severe depression. Perhaps practitioners who have more life experience engaging with people, including patients, while deliberately remaining in the present moment, develop a capacity to more accurately intuit on patient presentations. This capacity would be more evident in the treatment of patients with more severe depression.

8.1.2 **Study II – Quantitative findings regarding more effective practice (single level analysis)**

Study II focused on the yoked subsample of practitioner respondents and was found to be representative of the full practitioner respondent sample. The subsample displayed findings consistent with Study I regarding personal aspect associations and differences between practitioner groups on the personal aspects.

Practitioners were ranked based on the proportion of patients who showed statistically reliable improvement in the context of other practitioners in the same sample. The nine practitioners ranked in the upper 25% were grouped as more effective and the nine practitioners in the lower 25% were grouped as less effective. Practitioners were ranked based on all the patients they treated and based on patients treated within different severity levels (i.e., mild to severe depression).

Findings revealed that when providing treatment to all patients irrespective of patients initial severity levels, more effective practitioners displayed significantly higher levels of combined resilience and mindfulness compared to less effective practitioners. Further differences were found in terms of practitioners' mindfulness and combined resilience and mindfulness when comparing more effective and less effective practice. These differences, however, varied as a function of patient severity, where increasing differences were found with increasing patient severity levels. The findings suggest that combined resilience and mindfulness both have an overall role in yielding more effective treatment of all patients, and an increasing role in more effective treatment of patients with severe levels of depression.

8.1.3 **Study III – Quantitative findings regarding more effective practice (multilevel analysis)**

In Study III practitioners were ranked according to their respective patient residual scores in the context of the broad population of practitioners after controlling for relevant patient characteristics. Seven more effective and eight less effective practitioners were identified based on whether the 90% confidence intervals for individual practitioners' residual scores crossed zero thereby indicating that the outcomes for these practitioners were reliably different from the outcomes of the average practitioner in the sample.

Findings from multilevel modelling revealed that resilience, mindfulness, and combined resilience and mindfulness showed predictive value in reducing patient depression. Combined resilience and mindfulness, however, contributed more to patient improvement compared to the separate contributions of resilience and mindfulness. Examination of differences in personal aspects between more and less effective practitioners found that more effective practitioners showed significantly higher levels of mindfulness and combined resilience and mindfulness. Across the three personal

aspects, findings suggest a clear trend with more effective practitioners displaying relatively higher levels of resilience, mindfulness, and combined resilience and mindfulness. In contrast, there appears to be a contrary trend related to empathy. More effective practitioners display marginally lower levels of empathy compared to less effective practitioners.

8.1.4 **Studies IV & V – Findings regarding high intensity practitioners and template analysis**

In Studies V, VI, and VII, a yoked high intensity practitioner sub-sample was used. This sub-sample was found to differ from the yoked sample comprising PWPs on the proportion of patients seen with more severe levels of depression. As expected, high intensity practitioners worked with a relatively smaller volume of patients who comprised a larger proportion of patients with moderately severe to severe depression. High intensity practitioners were also found to be significantly older than PWPs by a mean age difference of 17 years. The practitioner groups additionally differed in their reasons for a preferred treatment if they were to receive treatment themselves. High intensity practitioners gave relatively more consideration to contextual factors (e.g., treatment match) compared to PWPs who gave greater weight to treatment strengths. The responses suggest that the practitioner groups differed in respect to what they considered were important to the delivery of effective practice and that these did not necessarily include consideration of the person of the practitioner.

Analyses of practitioners' unstructured responses identified a range of themes across the unstructured questions posed to them. The breadth of practitioners' responses and indications of their willingness to be open, candid, and to disclose relevant personal insights, indicate confidence in their responses. These observations were made in relation to responses where practitioners could have answered questions in a manner set out to influence a more positive impression of themselves: for example, in relation to their reasons for becoming practitioners and their responses to professional self-doubt.

8.1.5 **Studies VI & VII – Qualitative findings on more effective high intensity practitioners using multilevel analysis and template analysis**

Study VI comprised multilevel modelling analyses of high intensity practitioners' patient outcomes while controlling for patient characteristics. This analysis identified six practitioners at the extremes of the effectiveness continuum: two more effective and four less effective practitioners.

Study VII comprised qualitative analyses of practitioners' reflections on their personal and professional lives. Thematic differences between the more and less effective practitioners were identified in practitioners' reflections on their professional lives. These indicated differences in respect to practitioners' approaches to the therapeutic alliance in terms of areas that practitioners gave consideration to or found noteworthy. These areas comprised the patient, the practitioner, and/or the therapeutic skills.

Responses by more effective practitioners suggested behaviours associated with building or maintaining a therapeutic alliance; for example, with importance assigned to the parties involved in therapy (i.e., the patient and the practitioner). More effective practitioners indicated deliberate efforts to be open and responsive to patients and to be self-aware. They also appeared to give consideration to patients' capacities to influence their own improvement, connecting with the person of the patient.

This finding was in contrast to less effective practitioners who placed significance on being skilled in the application of theoretical models and approaches and who were influenced by personal bias of self-appraisal and apprehensions. Less effective practitioners indicated less consideration of the person of the patient, but rather appeared to treat patients as subjects with depression. More effective practitioners indicated drawing on resilience and mindfulness as suggested by practitioners' persistence to remain in the present-moment with patients. An absence of mindfulness was indicated in responses of less effective practitioners, as these practitioners showed limited significance given to being self-aware and behaviours did not appear to be autonomous. That is, responses suggested that practitioners acted while being influenced by personal biases and apprehensions.

8.2 **Thematic discussion: Structure**

Having summarised the findings at the level of individual studies, the following section sets out to meld these findings and to discuss them collectively across salient themes of practitioner variability and personal aspects. The first of the two themes concerns the extent of practitioner variability and how these differ between professions. The second theme discusses findings on mindfulness, combined resilience and mindfulness, empathy, and how personal aspects are associated with patient severity. The thematic discussions are then followed by a consideration of implications for research in routine practice settings, clinical practice and training, current research limitations, and finally future research.

8.3 **Variability in practitioner effectiveness**

Comparisons between findings on practitioner effectiveness can be made while remaining aware that the analyses involved differing but representative sub-samples as well as traditional benchmarking and differing multilevel models (i.e., with random intercept or random intercept and random slope). Irrespective of the range of differing analyses applied, one common finding is clear – based on more objective patient outcome data, there were systematic differences between practitioners in respect to their effectiveness in delivering psychological therapies.

Therapist effect sizes identified ranged from 6.3% down to 2.9% across different multilevel model designs. Null models identified effect sizes of 4.5% for high intensity practitioners and 5.9% for all practitioners. These findings were comparable although relatively lower than the effect size of 7% from Baldwin and Imel's (2013) meta-analysis. Direct comparisons of therapist effect sizes between low and high intensity practitioners were not possible given the small sample size of PWPs that would have generated unreliable therapist effect estimates. The varying therapist effect sizes, however, may be attributed to the cumulative variability associated with the relatively larger sample of practitioners (i.e., both high and low intensity) and the anticipated variability between PWPs who treat patients with severe depression above their professional roles. The findings suggest that, therapist effect values may reflect the relative challenge experienced by practitioners within their professional roles. This would take into account both patient severity levels and practitioners' professional roles.

In the current sample, PWPs, whose role is to provide brief and lower intensity interventions, treated approximately 50% of patients with moderately severe to severe depression. This compared to high intensity practitioners whose role is to provide high intensity treatment and who treated approximately 54% of patients with moderately severe to severe depression – that is, PWPs and high-intensity practitioners treated broadly similar proportions of moderately severe to severe depression.

Considering the differences between the practitioner groups where PWPs treated a relatively larger number of patients compared to high intensity practitioners, it could be argued that PWPs may experience patients as relatively more challenging compared to practitioners providing high-intensity treatment.

8.4 **Personal aspects**

Given the separate quantitative analyses together with subsequent qualitative analyses involving varying practitioner sub-samples, one preliminary question concerned whether there would be consistency in the practitioners identified as more or less effective. The more effective practice demonstrated by Practitioners A and B were consistently identified as more effective in the benchmarking and multilevel modelling analysis of all practitioners. In respect to less effective practice, Practitioners Y and Z were consistently identified as less effective in their treatment of all patients using benchmarking analysis. Although both more and less effective practice were identified based on practitioners' patient outcomes, the consistency of findings between the traditional and advanced quantitative methods provide robust evidence for the selection of more and less effective practitioners from which quantitative findings on resilience, empathy, and mindfulness can be interpreted along with qualitative findings.

8.4.1 **Resilience**

Resilience was found to be significantly associated with patient improvement and to account for between practitioner variance. This finding, however, was identified using multilevel modelling only and after accounting for practitioners' patient case-mix. Differences in resilience between more and less effective practitioner groups did not occur beyond the level of chance. It could be argued that

differences in practitioners' contributions of resilience may be masked by the variability of their patient case-mix. High intensity practitioners (i.e., both counsellor and CBT therapist groups) displayed comparable levels of resilience above that of PWPs. Perhaps resilience scores reflect more of a strengthening impact (otherwise known as a "steeling effect"; Rutter, 2012) while working with more severely depressed patients on practitioners rather than the reverse. This effect may apply specifically to high intensity in contrast to PWP practitioners. Research on steeling effects applies to conditions of brief exposure to repeated stress experiences that resolve or are not followed by overall stress or adversity (Levine & Mody, 2003; Stacey, Dearden, Pill, & Robinson, 1970). Comparing between high and low intensity practitioners, high intensity practitioners may experience stressors related to treatment sessions with patients. In contrast, low intensity practitioners may experience a more extended stress that may instead increase their vulnerability associated with working with patients with severe conditions beyond their professional capacity and a large number of patients.

8.4.2 **Empathy**

There was no evidence that empathy as a personal aspect was associated with patient improvement. Similarly, more effective and less effective practitioners did not differ in their levels of empathy. On the contrary, less effective practitioners displayed marginally higher empathy compared to more effective practitioners. It is important to note, however, that the empathy measure was scored as a unitary construct rather than three separate factors involving cognitive empathy, emotional connection and emotional contagion.

The current findings for empathy were not expected in light of research yield on the significant contribution of empathy to patient outcome (Elliott, Bohart, Watson, & Greenberg, 2011; Greenberg, Elliott, Watson, & Bohart, 2001). These unexpected findings may not reflect a contradictory finding related to empathy. It may, however, reflect a discrepancy between the general conceptual understanding of empathy as an accurate form of empathy (i.e., as functional in understanding another's emotion) as opposed to more recent broader conceptualisation of empathy that also includes the adverse impact of empathy and a person's willingness to be emotionally available to another person. The findings may also reflect differences in how empathy is characterised in therapeutic

practice to involve empathy as experienced by others in contrast to the current measure of empathy as a personal aspect that practitioners can draw on. The current findings suggest that while most practitioners identified with having a high level of empathy (i.e., a more functional nature of empathy) that informs their understanding of patients' emotions, less effective practitioners may indicate having a higher level of empathy, however associated with being emotionally affected by their experience of patients' emotions.

Psychotherapy research in its extensive examination of the therapeutic features of empathy appears to have yielded limited evidence on more broad general dimensions of empathy (Coutinho, Silva, & Decety, 2014). In general terms, the evidence suggests that practitioners are expected to be empathic but empathic only in the functional manner. This conceptual distinction could be illustrated by Rogers (1957, p 99) where he described empathy as follows: "to sense the client's anger, fear, or confusion as if it were your own, yet without your own anger, fear or confusion getting bound up in it". Empathy has been examined for its therapeutic value rather than as a naturally occurring personal aspect that may have a positive and aversive impact on individuals and their willingness to engage in it.

8.4.3 **Mindfulness**

Mindfulness was found to significantly contribute to the reduction of patient outcome scores and accounted for variance between practitioners. This was similarly reflected in traditional comparisons between more effective and less effective practitioners. Personal reflections by more effective practitioners expounded how these practitioners indicated maintaining a stance of being present with patients. Related to mindfulness, practitioners also held a perspective valuing the role of those present in the therapeutic setting (i.e., the patient and the practitioner). Less effective practitioners in contrast, displayed relatively lower scores in mindfulness and held a perspective valuing the role of the treatment approach and their flexibility in applying these. There was limited consideration to be present to the patient or to be self-aware. In addition, less effective practitioners appeared to show a greater likelihood to respond in a less autonomous manner – that is, consistent with personal biases

(e.g., bias of positive self-appraisal) and apprehension (e.g., apprehension experienced while working with a challenging patient).

8.4.4 **Combined resilience and mindfulness**

Set against considering personal aspects separately, combined resilience and mindfulness contributed to a greater extent towards patient improvement. Comparatively, the combination also accounted for relatively more variance between practitioners, with more effective practitioners displaying significantly higher levels of resilience and mindfulness compared to less effective practitioners. The findings suggest perhaps that this personal aspect combination constitutes a unique entity in itself that is greater than the sum of the separate personal aspects. Although combined resilience and mindfulness were found to be higher in more effective practitioners irrespective of their theoretical orientation, systematic differences between practitioner groups were identified. Collectively, only amongst counsellors, was this combined aspect relationship evident. The findings suggests that while individual practitioners who are more effective display higher combined resilience and mindfulness, engaging in the delivery of counselling fosters or harnesses the application of this aspect combination. This raises two queries: Firstly, how can this combination be applied in the context of professional practice, and secondly, why is such a relationship evident amongst counsellors. Perhaps a better understanding can be derived from the unique features of qualitative responses of more effective compared to less effective practitioners.

Based on practitioners' qualitative accounts, it appears that combined resilience and mindfulness are complementary while serving differing functions. Responses by more effective practitioners suggested the presences of resilience that entailed a deliberate effort to remain mindful (i.e., in the present moment with patients). In contrast, less effective practitioners indicated a deliberate effort to apply therapeutic skills or treatment approaches. In some less effective practitioners, the absence of mindfulness was indicated given practitioners' lack of autonomy. In these instances, deliberate effort was compounded by personal biases and apprehensions, suggesting that mindfulness plays a key role in the aspect combination. The combination arguably may be characterised by the concept of *velocity* – that is, where resilience indicates the speed/drive of a

practitioner and mindfulness indicates that which informs the direction of a practitioner's response. Put together, practitioners are likely to apply themselves more effectively to respond in a personalised and congruent manner to patients as people rather than primarily to their symptoms.

How this combination relates to the practice of counselling could be explained by a fundamental difference between the theoretical orientations of counselling and CBT. Counselling-oriented practice is relatively more flexible in its structure compared to CBT-oriented practice (i.e., with more definitive manualised procedures). As such counsellors may feel called on to engage mindfully while working with patients. Comparatively it may be relatively easier for CBT practitioners to rely on the structure inherent in CBT that could be described as prescriptive for patient symptoms (following from the medical model). This feature may also be more pronounced for CBT practitioners working within the IAPT service delivery model. Counsellors may therefore experience a stronger need to engage with patients moment to moment rather than providing specific treatment components to patients who meet a specific diagnostic criterion. As indicated by the existence of effective practice across theoretical orientations, the key contrast here for effective practice is not the different theoretical structures. Although these do influence the way each could be utilised by practitioners, the difference rather pertains to the degree of reliance or attention given to approaches above that provided towards understanding the patient as unique and variable.

Considering the conceptual relationship between resilience and mindfulness, the findings suggest that the two personal aspects share overlapping as well as separate features. As mentioned, resilience and mindfulness showed a positive association where an increase or decrease in one corresponds with the same effect for the other aspect. This combination of aspects as well as mindfulness alone has been consistently found to be associated with more effective practice. In line with this relationship, looking at the separate aspect contributions, relatively more mindfulness alone and resilience alone have been related to more effective practice. Entering both personal aspects as separate predictors in the multilevel model, however, resulted in both personal aspects being non-significant contributors to patient outcome. This is in contrast to a significant contribution for the additive measure (R+M) and suggests that resilience and mindfulness may function in a relational (or

synergistic) manner. Research suggests shared features associated with neuroplasticity and adaptability (Davidson, 2000, Davidson, 2013; Davidson et al., 2003; Southwick & Charney, 2012), however, notably, the two aspects are fundamentally different in relation to their philosophy on the role or influence of the ego. Resilience may relate to personal agency or may concern the ego as a primary determinant of human behaviour (Hauser & Allen, 2006), and has been measured as an ego-related feature (Ego Resiliency-89: Block & Kremen, 1996; Revised Ego-Resiliency 89 Scale: Alessandri, Vecchione, Caprara, & Letzring, 2012). In contrast, the very influence of the ego that would include personal biases, affective states and interests is reduced in mindfulness. In mindfulness, it is this non-attachment to the ego that facilitates a state of psychological freedom where unconditional learning can occur. The current findings may suggest that practitioners whose resilient behaviour is informed by their ability to be mindful may lead to better patient outcomes. This contrasts with practitioners whose resilient behaviour is influenced by their ego (including, personal self-appraisal biases and apprehensions), suggestive of lesser use of mindfulness. This interpretation is supported by the qualitative findings where less effective practitioners were found to display a bias in self-appraisal and displayed pre-occupation with apprehensions related to working with patients.

The current findings examined an additive as well as an interactive relationship between resilience and mindfulness, with the former relationship making a largely significant contribution towards patient outcome compared to the latter. The findings suggest perhaps there exists a large contribution facilitated through a more direct as opposed to a multiplicative relationship between resilience and mindfulness. Further discussion of this goes beyond the scope of the current research. However, it does call for further research to examine the nature of the relationship between resilience and mindfulness.

8.4.5 **All personal aspects examined and effective practice**

More effective practitioners, when compared with less effective practitioners, displayed higher levels of resilience, mindfulness, and combined resilience and mindfulness and a marginally lower level of empathy. This pattern distinguishes resilience and mindfulness from empathy. Varying observations

can extend from this finding. For one, the two former personal aspects share a common feature in being *intra*-personal (i.e., pertaining within individual practitioners although also applicable in interpersonal contexts). In contrast, empathy is uniquely *inter*-personal (i.e., the development and application of empathy necessitates the presence of other people). In respect to practitioners' use of these personal aspects, more effective practitioners may be more reliant on their resilience and mindfulness while, in contrast, less effective practitioners may be more reliant on empathy.

Another observation is that while empathy is central to enable practitioners' to understand patients' emotions, it is not sufficient for the delivery of more effective practice. This finding is consistent with Rogers (1957) proposal that empathy, although necessary, is only one of many other conditions necessary to establish sufficiency for patient therapeutic change to occur. Looking further into Roger's (1957) famous descriptions of necessary and sufficient conditions, there emerge similarities between the current findings and Roger's proposal, notwithstanding the different time periods, language used, and developments in psychological research. Rogers describes practitioners "genuineness in the relationship" as essential and elaborates that this involves therapists being "accurately himself". An illustration is provided involving a therapist "not denying" personal apprehensions (if present) rather accepting of these. Arguably Rogers' description is similar to the state of mindfulness where practitioners are self-aware and by this virtue are able to be less influenced by personal apprehensions. Roger's also argues for the presence of "unconditional positive regard" that involves caring for the patient "but not in a possessive way or in such a way as simply to satisfy the therapist's own needs". Similarly, Roger's addresses practitioners' personal inclinations that may interfere with the therapeutic process, a feature also present in mindfulness.

8.4.6 **Patient severity**

The accounts given above discuss how mindfulness and combined resilience and mindfulness were found to be higher in more effective compared to less effective practitioners, based on all practitioners' patient outcome. This observation, however, varied as a function of patient severity. The more severe the patient depression was, the more that effective practice was associated with increasing levels of mindfulness and combined resilience and mindfulness. These findings suggest

that for patients who are more severely depressed compared to those less severely depressed, it matters more who their practitioner is. In other words, to facilitate better patient outcome for more severely depressed patients, it is important for practitioners to apply themselves in a significantly resilient and mindful manner. This finding is consistent with findings from Saxon and Barkham (2013) who, using a different patient sample and a different primary outcome measure, found increasing variability between therapists' effectiveness as a function of increasing severity in patients' psychological conditions.

8.5 **Implications for training and professional practice**

The above findings have practical implications on how practitioners can learn to cultivate or utilise their personal aspects of resilience, empathy, and mindfulness to facilitate the delivery of more effective practice. The following sections provide recommendations of how this could be carried out.

8.5.1 **Cultivating resilience**

Guidance regarding instruction on resilience training is suggested by McAllister and McKinnon's (2009). The authors provide recommendation of specific approaches on how resilience can be taught for undergraduates and practitioners within health disciplines. Methods are proposed to develop individuals' insight into their resilience; for example, engagement in learning contexts to explore and articulate questions related to personal identity, beliefs, aspirations, coping abilities, strengths development, and how to be prepared for foreseeable stressors. Within the workplace, the authors suggest practitioners be provided with opportunities to reflect, learn from practice, other practitioners, and exposure to role models.

One possible way forward would be for resilience to be cultivated, firstly, with respect to theoretical training at a concrete level focusing on the psychoneurobiology of stress and stress responses (e.g., research on stress by Davidson, 2000; McEwen, Gray & Nasca, 2015). Secondly, trainees could be provided with a task of maintaining a personal journal to record their experiences of stress and ways of responding to these experiences. This may not only increase trainees' insight regarding their resilience but also foster a habit of being aware of their stress and responses to stress. The latter may

subsequently enable practitioners to recognise when they may be experiencing increased stress and how to utilise appropriate coping mechanism to respond to such occasions.

Although the discussion above addressed a possible strengthening effect of stress on high intensity practitioners related to working with more severely depressed patients, recent evidence of burnout has been reported of therapists working within IAPT services (Steel, Macdonald, Schröder, & Mellor-Clark, 2015). Participants included high and low intensity practitioners who were grouped as one sample, therefore overall findings on practitioner burnout did not identify the prevalence of burnout between high and low intensity practitioners. It may be recommended that different approaches are taken when cultivating resilience for high and low intensity practitioner groups, including re-appraisal of practitioners match between their demands and available resources.

8.5.2 **Cultivating mindfulness**

More effective practitioners in the current thesis displayed relatively higher levels of mindfulness as reflected consistently in both quantitative and qualitative accounts. The current findings do not immediately suggest that instruction alone in mindfulness is sufficient. In the current sample of practitioners, counsellors displayed a relatively higher level of mindfulness. In order to address this issue, it is necessary to revert to the prevalence of mindfulness activities between practitioner groups. Counsellors did not notably report engaging in more mindfulness exercises compared to CBT therapists. The former group reported engaging in informal and/or prayer-related activities and formal mindfulness exercises. CBT practitioners reported engaging in informal and formal mindfulness activities, with both groups reporting engagement at similar levels. Counsellors comprised practitioners some of whom had not received formal training in the subject of mindfulness, practitioners who were relatively older and more experienced. Research findings show that mindfulness exercises are beneficial to well-being and improves effectiveness. However, there are unique features that may be key in accounting for differences between the practitioner groups. These comprise practitioners' age and perhaps their motivation.

Accounts of practitioners' age have been addressed earlier in this discussion. Differences in practitioner motivation perhaps relates to differences in the structure of the theoretical orientation

practiced. In respect to the less and more structured orientation of counselling and CBT approaches, as discussed above, counsellors may display higher levels of motivation or need to engage with patients in the present moment compared to CBT therapists. In respect to mindfulness training, some commentators may argue that mindfulness exercises represent a form of self-hypnosis or relaxation. Research clearly shows personal gain derived from mindfulness and its cultivation (Brown & Ryan, 2003; Cohen & Miller, 2009; Waelde et al., 2008). However, drawing on mindfulness in professional practice may entail a corresponding preparedness to be less dependent or attached to manualised procedures and a motivation to appreciate each patient as unique. This interpretation is supported by the current finding where more effective practitioners, irrespective to their treatment orientation, gave more importance to those present in therapy (i.e., the patient and the practitioner) while less effective practitioners gave more importance to the techniques and/or approach used.

Within the field of psychotherapy, the cultivation of mindfulness has been applied mainly within the context of clinical practice; for example, MBSR (Kabat-Zinn, 1982) and Dialectical Behavioral Therapy (DBT; Linehan, 1993). A study of mindfulness training of practitioners found that Mindfulness-Based Stress Reduction (MBSR) increased counselling trainees' mindfulness, measured using the MAAS (Shapiro, Brown, & Biegel, 2007). The findings showed improved trainee self-care which has implications for practitioner effectiveness. The study however, did not examine mindfulness in relation to patient outcomes. Further research could examine the application of MBSR in training practitioners and the impact this has on patient outcome.

The cultivation of combined resilience and mindfulness may follow from practitioners' genuine motivation to understand patients as unique and variable as well as practitioners' appreciation of the variable factors that contribute to effective practice. If practitioners do not over-attribute patient improvement to a treatment approach or specific treatment strategies, there is likely to be a shift in how they may attend towards patients.

8.5.3 **Addressing empathy**

The current findings highlight a difference in conceptualisation of empathy as a broad personal aspect in contrast to research focus on its functional therapeutic value. The multiple factors of empathy give

rise to appreciating potentially different influences on patient outcome. For example, with high cognitive empathy and/or emotional connection potentially contributing to patient improvement and high emotional contagion potentially adversely impacting on patient improvement. Perhaps practitioners can be encouraged to gain better insight to their empathy across these multiple factors, to address how to respond when significantly emotionally affected by patients' emotions, and how to address related issues; for example, if a practitioners notices tendencies to be emotionally disconnected while working with patients.

8.6 **Implications for research in practice settings - engaging practitioners**

The current thesis is one exemplar of research that has entailed a collaborative process between researchers and practitioners. Collaboration firstly occurred with service decision makers (i.e., director and senior clinicians). Here, researchers and the director worked together in shaping the design of the research to one that was feasible for practitioner participation to occur.

As per routine research processors, ethical approval was obtained from the National Health Service with suitable provisions made to ensure that practitioner and patient data remained anonymous, confidential, and that data was to be protected. A key component of the current research was engagement with potential practitioner participants. Practitioners were provided with accounts of the current research up to a year in advance of the research being conducted. These included presentations, forum discussions, and newsletters. The researcher sought to make herself available to practitioners and utilised opportunities to engage with practitioners for example at shared events (e.g., conference events). Practitioners were requested to complete structured and unstructured questionnaires. These were selected and designed in a manner sensitive to the role and skill that are likely to be demonstrated by practitioners. Unstructured questions drew on practitioners' capacity to conceptualise individuals, a common activity they are likely to engage in while working with patients. Questionnaires were further briefly presented to senior clinicians in order to obtain feedback to then adapt questions more appropriately to practitioners.

A common expression provided by practitioners was that they are often faced with many requests to participate in research and that these contribute to the various demands placed on them. In

consideration of practitioners' primary role, practitioners were reminded of the immediate relevance of the current research findings to their practice. Practitioners were also informed that aggregate level feedback on the findings would be provided.

Further opportunities of collaboration and engagement with practitioners could occur at a service level or individual level. Relevant practical training related to the generation and/or interpretation of routine feedback could be provided.

8.7 **Caveats**

The current PhD thesis contributes to research by providing some understanding of the phenomenon of therapist effects. The research significantly differs from predominant psychotherapy research because practitioners are examined as ordinary individuals with personal qualities that practitioners could utilise within their professional roles. Appreciation of the findings call for certain caveats associated with the purpose and design of the research.

The primary focus of current was on therapist variability. As such, the research did not incorporate a design to enable the examination of treatment effects. This is evident as the primary researcher did not set out to recruit equivalent practitioner sample sizes of each practitioner treatment group. A caveat here is that treatment effects were not incorporated in the multilevel model in order to ascertain therapist effects over and above the presence of treatment effects. Findings on group differences between the practitioners in respect to their treatment approaches suggest a possible dynamic relationship between treatment and therapist effects. This could be examined in further research with sufficient practitioner samples.

In consideration of patient and practitioner variables, the current research only controlled for patient characteristics rather than practitioner characteristics. The research was designed in this manner in order to examine all practitioners in their own right given, for example, their respective age, work experience, and gender. The pragmatic nature of the research saw little benefit in controlling for practitioners' personal characteristics that cannot be manipulated in real life. Analyses were conducted to generate finding relevant to routine practice.

The personal aspects examined of resilience, empathy and mindfulness are conceptualised as a function of the person of the practitioner rather than a function of the patient. A caveat of the currently findings would apply particularly for empathy. In psychotherapy research, practitioner empathy is often conceptualised as empathy experienced by patients. The current findings do not contradict this conceptualisation of empathy but rather provides a broader perspective on empathy. While practitioners may not be privy to patients' experience of empathy, they may be in a better position to report on their own perceptions of their empathy with indications on how they may draw on this in their day to day living, including their professional practice.

8.8 **Limitations**

There is no known research that has examined the current combination of personal aspects. Findings on mindfulness and combined resilience and mindfulness are novel and limited by the very fact that there are no known studies that focus on these aspects in the context of IAPT service delivery or more broadly within the field of psychotherapy research. Similarly, limitations relate to the specific features of the current research, including the use of single measures for each construct.

The sample of practitioners in the current study is unlikely to be a representative sample of practitioners in the broader population of practitioners given the unique features of IAPT services. This would limit the generalisability of findings beyond the context of IAPT services. Limitations would also apply within the context of IAPT services given the notably smaller sample of PWPs compared to CBT therapists and counsellor participants. This might have been likely to occur as PWPs may have been less confident to participate. Alternatively they may have considered potential benefits from the study as less relevant to their practice with the exception of resilience. Across all practitioner groups, however, the subsample examined displayed a degree of representativeness out of the full original practitioner sample in the IAPT dataset acquired. The current subsample of respondents comprised a few less effective practitioners out of the full IAPT practitioner dataset and a larger proportion of respondents identified as more effective out of the full practitioner dataset. Therefore, although the subsample comprised an average of more effective practitioners, comparisons

between more and less effective practitioners remained representative of the full practitioner dataset sample.

Given the exploratory nature of the current research, significant findings where multiple comparisons were conducted are likely to include some Type 1 errors. Although some findings may constitute false positive findings, consistencies in the findings on practitioners' mindfulness, and combined resilience and mindfulness across the quantitative (benchmarking and multilevel modelling analyses) and qualitative (template analyses), provide the basis for more research to be conducted on these personal aspects.

8.9 **Future research**

In line with the limitations mentioned above, future research could similarly examine the personal aspects of resilience, empathy, and mindfulness or variants of these. While examining personal aspects of practitioners, future research could perhaps study the relationship between professional socialisation and how this relates to practitioners' individual influence on patient outcomes. A focus of future research could be of practitioners who display higher levels of empathy and investigate the relative contributions of emotional contagion, emotional connection, as well as cognitive empathy.

In respect to research methodology, further research could be conducted using large datasets from routine practice settings including IAPT datasets or combining datasets across services. Similar to the current research, more studies could utilise mixed and integrated qualitative and quantitative methods to identify robust findings. Research could further examine differences between traditional and more advanced research methodology. This could be used to understand the practical implications on practitioners training and job-retention in the context of statistical analyses conducted within routine practice services. However, for all the sophistication of multilevel modelling, in reality routine services may be more likely to utilise traditional benchmarking approaches until the next generation of user-practitioner friendly modelling becomes available.

8.10 **Conclusion**

In sum, the work in this thesis has utilised a range of methodologies to consider the question: what qualities does a practitioner bring to therapy that might contribute to enhanced effectiveness? The findings suggest a modification to the question, namely that there exists a dynamic relationship between the influence of practitioners' personal aspects on their practice and the influence of practice on practitioners' personal aspects. Practitioners have shown varying levels of resilience, empathy, and mindfulness. These, however, appear to be systematically influenced by their professional roles, the theoretical-orientation they ascribe to, and the severity levels of their patients.

Notwithstanding this dynamic relationship, the combined roles for resilience and mindfulness consistently emerged as being associated with enhanced effectiveness. The findings highlight the significance of human interaction suggesting that the better a practitioner *gets* or understands his/her patient, the practitioner is then in a better position to respond effectively to that patient using established treatment approaches. In general, the current findings share common elements with Roger's famous proposal of necessary and sufficient constituents of therapeutic practice. Perhaps novel to the current research is the potential for practitioners to gain a know-how or better practical understanding of how they can apply themselves in a natural manner involving – being present.

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10 Appendices

APPENDIX I Pragmatic review reference index; 10 February 2015

No	Filing No	Year	References (Title)	Authors	2011 – 2015 / current (inclusive) Search term: *"therapist effect*"*			Reason for exclusion
					Scopus **(57)** ***(article title, abstract, keywords)***	**WebOfScience (54)** ***(topic OR title)***	**PsyINFO** **(35)** ***(key concepts OR title)***	
					Serial numbers matching serial number of respective database findings **(no of citations)**			
INCLUDED (Therapist Effects in patient outcome)								
1.	1.	2014	Therapist effects and IAPT Psychological Wellbeing Practitioners (PWPs): A multilevel modelling and mixed methods analysis	Green, H., Barkham, M.,Kellett, S., Saxon, D.	3 (0)	3 (0)	3	-
2.	2.	2014	Heterogeneity in Patient-Reported Outcomes following Low-Intensity Mental Health Interventions: A Multilevel Analysis	Ali, Shehzad; Littlewood, Elizabeth; McMillan, Dean; et al.	-	5 (0)	-	-
3.	4.	2013	Uniformity of evidence-based treatments in practice? Therapist	Laska, K.M., Smith, T.L.,Wislocki,	28 (3)	28 (5)	13	-

			effects in the delivery of cognitive processing therapy for PTSD	A.P., Minami, T.,Wampold, B.E.				
4.	5.	2013	Psychotherapists' self-reports of their interpersonal functioning and difficulties in practice as predictors of patient outcome	Nissen-Lie, H.A., Monsen, J.T., Ulleberg, P.,Rønnestad, M.H.	29 (5)	29 (5)	-	-
5.	6.	2012	Therapist effects in substance abuse treatment: A naturalistic study	Artkoski, T., Saarnio, P.	35 (0)	39 (0)	19	-
6.	7.	2012	Patterns of therapist variability: Therapist effects and the contribution of patient severity and risk	Saxon, D., Barkham, M.	36 (8)	32 (9)	18	-
7.	10.	2011	Therapist effectiveness: Implications for accountability and patient care	Kraus, D.R., Castonguay, L., Boswell, J.F.,Nordberg, S.S., Hayes, J.A.	50 (30)	49 (26)	30	-
8.	11.	2011	Client and Therapist Variability in Clients' Perceptions of Their Therapists' Multicultural Competencies	Owen, J., Leach, M.M.,Wampold, B., Rodolfa, E.	56 (18)	54 (13)	31	-
9.	17.	2014	Treatment adherence: The importance of therapist flexibility in relation to therapy outcomes	Owen, J., Hilsenroth, M.J.	7 (0)	11 (1)	5	-
10.	19.	2014	Therapist effects and the outcome-alliance correlation in cognitive behavioral therapy for panic disorder with agoraphobia	Huppert, J.D., Kivity, Y.,Barlow, D.H., (...), Gorman, J.M., Woods, S.W.	14 (1)	16 (3)	8	-
11.	22.	2012	Effect of early working alliance on retention in outpatient substance abuse treatment	Knuuttila, V., Kuusisto, K.,Saarnio, P., Nummi, T.	30 (0)	-	-	-
12.	24.	2012	Early working alliance in outpatient substance abuse treatment: Predicting substance use frequency	Knuuttila, V., Kuusisto, K.,Saarnio, P., Nummi, T.	33 (0)	40 (0)	-	-

			and client satisfaction					
13.	25.	2012	'No-Show': Therapist Racial/Ethnic Disparities in Client Unilateral Termination	Owen, Jesse; Imel, Zac; Adelson, Jill; et al.	-	38 (4)	16	-
14.	26.	2011	Interaction between alliance and technique in predicting patient outcome during psychodynamic psychotherapy	Owen, J., Hilsenroth, M.J.	48 (23)	47 (20)		-
15.	36.	2012	Therapist effects in a NIDA CTN intervention trial with pregnant substance abusing women: Findings from a RCT with MET and TAU conditions	Erickson, S.J., Tonigan, J.S., Winhusen, T.	42 (1)	-	23	-
16.	46.	2013	Everyday evidence: Outcomes of psychotherapies in swedish public health services	Werbart, A., Levin, L.,Andersson, H., Sandell, R.	26 (4)	26 (2)	-	-
17.	64.	2013	Stigma for seeking therapy: Self-stigma, social stigma, and therapeutic processes	Owen, J., Thomas, L.,Rodolfa, E.	23 (0)	24 (0)	-	-
18.	68.	2014	Therapist Differences in Symptom Change With Racial/Ethnic Minority Clients.	Hayes, Jeffrey A; Owen, Jesse; Bieschke, Kathleen J.	-	-	4	-
19.	73.	2012	Patient early session experience and treatment outcome	Pesale, F.P., Hilsenroth, M.J., Owen, J.J.	39 (4)	41 (5)	-	-
20.	74.	2011	Therapist effects on disparities experienced by minorities receiving services for mental illness	Larrison, C.R.,Schoppelrey, S.L.	45 (1)	43 (1)	26	-
EXCLUDED (Not in English):								
21.	55.	2015	Therapist effects in the treatment of adolescents with generalized social phobia (Spanish)	Olivares-Olivares, P.J.,Montesinos, L., Rosa-Alcázar, A.I., Macià, D.,Amorós,	1 (0)	2 (0)	-	Not in English

				M.				
22.	56.	2013	The role of the psychotherapist's own psychotherapy. (Norwegian)	Paulsen, Jonas; Peel, Thomas Hugh.	-	-	12	Not in English
23.	57.	2012	De rol van de behandelaar: De 'vergeten' factor in ROM | [The role of the therapist: The 'forgotten' factor in ROM] (Dutch)	De Jong, K.	43 (4)	-	-	Not in English
24.	58.	2012	Was tun mit dem Therapeuten-Effekt? | [How to handle the therapists effect?]	Berger, U., Wick, K.	44 (2)	-	-	Not in English
EXCLUDED (Secondary articles):								
25.	8.	2012	Correction to Saxon and Barkham (Patterns of therapist variability: Therapist effects and the contribution of patient severity and risk)	Saxon, David; Barkham, Michael.	-	-	17	Secondary article (correction)
26.	12.	2011	Deconstructing multicultural counseling competencies research: Comment on Owen, Leach, Wampold, and Rodolfa (2011).	Worthington, Roger L; Dillon, Frank R.	-	-	34	Secondary article (commentary)
27.	13.	2011	Multicultural counseling competencies: An analysis of research on clients' perceptions: Comment on Owen, Leach, Wampold, and Rodolfa (2011)	Ridley, Charles R; Shaw-Ridley, Mary.	-	-	32	Secondary article (commentary)
28.	14.	2011	Multicultural approaches in psychotherapy: A rejoinder.	Owen, Jesse; Leach, Mark M; Wampold, Bruce; Rodolfa, Emil.	-	-	33	Secondary article (commentary)
29.	21.	2013	Can psychotherapists function as their own controls? Meta-analysis of	Falkenström, F.,Markowitz,	24 (5)	25 (5)	-	Secondary article (meta-analysis)

			the crossed therapist design in comparative psychotherapy trials	J.C., Jonker, H., Philips, B., Holmqvist, R.				
30.	43.	2014	Patient attitudes towards videotaping as they relate to symptomatology and treatment outcomes.	Briggie, Alexis M.	-	-	7	Secondary (TPE in relation to videotaping and not provision of psychotherapy)
31.	44.	2013	"Easy to sense but hard to define": Charismatic nonverbal communication and the psychotherapist	Heide, F.J.	21 (0)	-	11	Secondary (Discussion paper)
32.	45.	2013	Is low therapist empathy toxic?	Moyers, T.B., Miller, W.R.	22 (8)	23 (4)	15	Secondary (Discussion paper)
33.	47.	2012	The Center for Collegiate Mental Health: Studying College Student Mental Health Through an Innovative Research Infrastructure That Brings Science and Practice Together	Locke, Benjamin D.; Bieschke, Kathleen J.; Castonguay, Louis G.; et al.	-	33 (3)	-	Secondary (Review article)
34.	49.	2011	Adolescent Co-Occurring Disorders Treatment: Clinicians' Attitudes, Values, and Knowledge	Denby, R.W., Brinson, J.A., Jessica, A.	57 (0)	-	-	Secondary article (Clinicians' attitudes)
35.	50.	2013	Design and analysis of non-pharmacological treatment trials with multiple therapists per patient	Roberts, C., Walwyn, R.	27 (1)	27 (1)	-	Secondary article (simulation study - methodology)
36.	51.	2012	Benchmarking therapists: Furthering the benchmarking method in its application to clinical practice	Minami, T., Brown, G.S.,McCulloch, J., Bolstrom, B.J.	34 (1)	31 (2)	-	Secondary article (simulation

			Benchmarking therapists					study - methodology)
37.	52.	2012	How many therapists? Practical guidance on investigating therapist effects in randomized controlled trials for eating disorders (TPE in RCT for eating disorders (methodology guide on number of therapists needed)	Thompson, D., Cachelin, F., Striegel-Moore, R.H., (...), Shea, M., Wilson, G.T.	37 (1)	34 (0)	21	Secondary article (simulation study- methodology)
38.	53.	2012	Bringing the psychotherapist back: Basic concepts for reading articles examining therapist effects using multilevel modeling	Adelson, J.L., Owen, J.	41 (7)	37 (9)	24	Secondary article (simulation study- methodology)
39.	54.	2011	Intraclass correlation associated with therapists: Estimates and applications in planning psychotherapy research	Baldwin, S.A., Murray, D.M., Shadish, W.R., (...),Trepka, C., Watson, J.	53 (7)	53 (9)	-	Secondary article (review – methodology)
40.	62.	2014	A systematic review of relations between psychotherapist religiousness/spirituality and therapy-related variables.	Cummings, Jeremy P; Ivan, Mihaela C; Carson, Cody S; Stanley, Melinda A; Pargament, Kenneth I.	-	-	6	Secondary (review)
41.	65.	2011	Specificity theory: The evolution of a process theory of psychoanalytic treatment	Bacal, H.A.	46 (1)	45 (0)	-	Secondary (Commentary)
42.	69.	2013	Early career perspectives on psychotherapy research and practice: Psychotherapist effects, multicultural orientation, and couple interventions (review and discussion)	Owen, J.	17 (1)	19 (1)	9	Secondary (Discussion paper)
EXCLUDED (Non-face-to-face treatment and non-psychiatric):								

43.	28.	2015	Effects of an interpersonal-psychotherapy-oriented postnatal programme for Chinese first-time mothers: A randomized controlled trial	Gao, L.-L., Xie, W., Yang, X., Chan, S.W.C.	2 (0)	1 (0)	-	Non-psychiatric sample
44.	29.	2014	Experienced Carers Helping Others (ECHO): Protocol for a pilot randomised controlled trial to examine a psycho-educational intervention for adolescents with anorexia nervosa and their carers	Rhind, C., Hibbs, R.,Goddard, E., (...),Tchanturia, K., Treasure, J.	6 (0)	8 (0)	-	Non-psychiatric sample
45.	30.	2014	Rehabilitation aimed at improving outdoor mobility for people after stroke: A multicentre randomized controlled study	Logan, P.A., Armstrong, S., Avery, T.J., (...),Woodhouse, L.J.,Leighton, M.P.	12 (0)	9 & 10 (0)	-	Non-psychiatric sample
46.	31.	2014	Psychological interventions for individuals with cystic fibrosis and their families	Goldbeck, Lutz; Fidika, Astrid; Herle, Marion; et al.	-	14 & 15 (0)	-	Non-psychiatric sample
47.	32.	2014	A randomized placebo-controlled pilot study of the impact of healing touch on fatigue in breast cancer patients undergoing radiation therapy	Fitzhenry, F., Wells, N., Slater, V., (...), Wisawatapnimit, P., Chakravarthy, A.B.	4 (1)	12 (2)	-	Non-psychiatric sample
48.	33.	2013	Assessing the influence of treating therapist and patient prognostic factors on recovery from axial pain	Simon, C.B., Stryker, S.E., George, S.Z.	18 (0)	21 (0)	-	Non-psychiatric sample
49.	34.	2013	Perceived therapist effectiveness: An examination of Orthodox Jewish adolescent sample.	Bindiger, Alissa.	-	-	14	Non-psychiatric sample
50.	35.	2012	Therapist effects and the dissemination of cognitive behavior therapy for chronic fatigue syndrome in community-based	Wiborg, J.F., Knoop, H.,Wensing, M., Bleijenberg, G.	40 (5)	35 (0) 36 (5)	22	Non-psychiatric sample

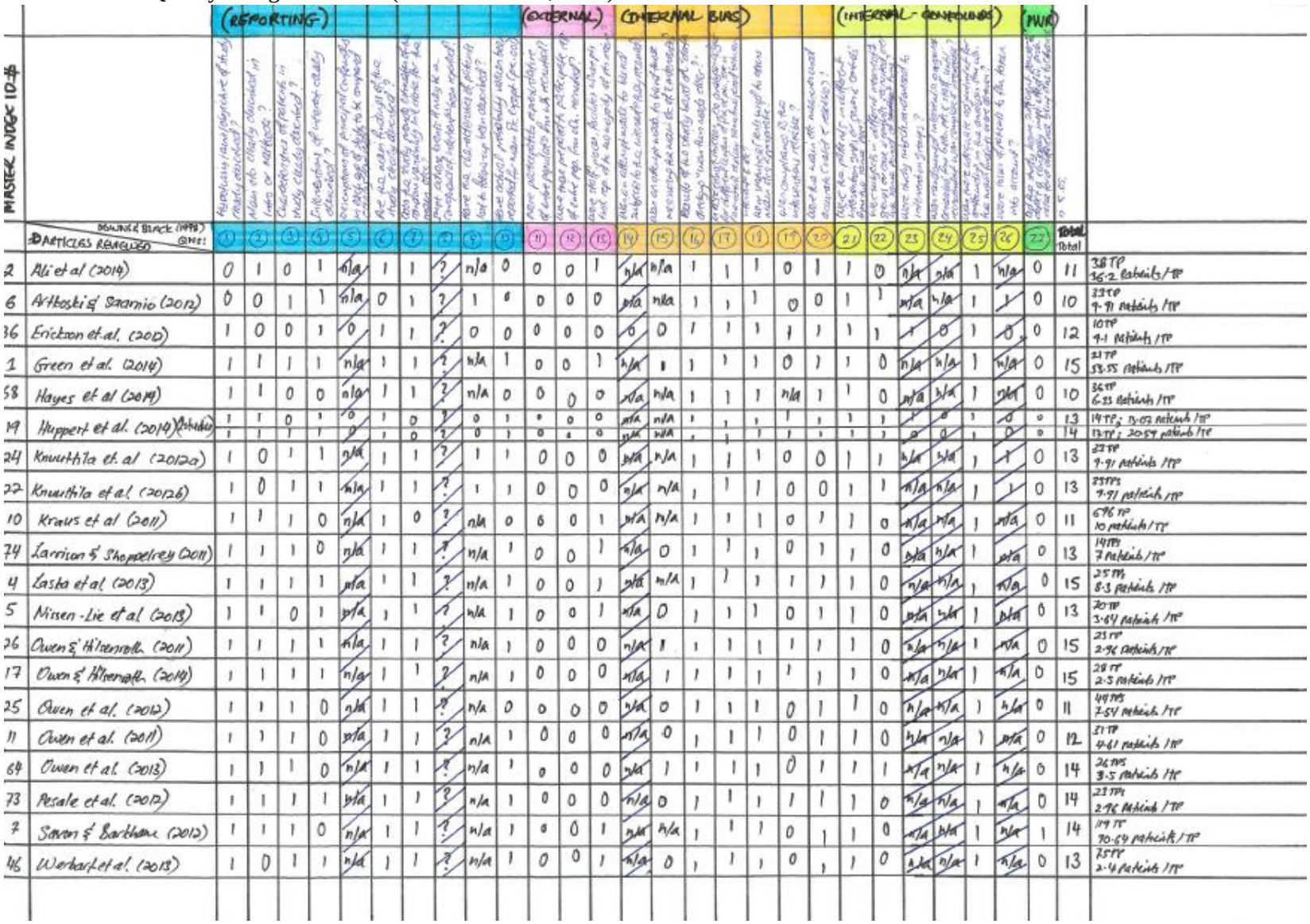
			mental health care					
51.	37.	2011	Therapist effects in routine psychotherapy practice: An account from chronic fatigue syndrome	Cella, M., Stahl, D., Reme, S.E., Chalder, T.	52 (8)	50 (10)	29	Non-psychiatric sample
52.	38.	2011	The Role of Leaders' Working Alliance in Premarital Education	Owen, J.J., Rhoades, G.K.,Stanley, S.M., Markman, H.J.	55 (14)	51 (11)	25	Non-psychiatric sample
53.	39.	2011	Therapist effects in guided internet-delivered CBT for anxiety disorders	Almlov, J., Carlbring, P.,Kllqvist, K., (...), Cuijpers, P., Andersson, G.	51 (13)	48 (14)	27	Non-face-to-face treatment
54.	59.	2014	Examining the effectiveness of action plans derived from the root cause analysis of incidents occurring in a radiation therapy department	Wu, T.-Y.J., Bristow, B.,Liszewski, B.	11 (0)	-	-	Non-psychiatric (irrelevant)
55.	60.	2014	Bullying among radiation therapists: Effects on job performance and work environment	Trad, M., Johnson, J.	13 (0)	-	-	Non-psychiatric (irrelevant)
56.	61.	??	Intelligent health care electric negative pressure tank, has micro-vacuum pump connected with vacuum pump driving control circuit, and lithium ion battery connected with charging management circuit	??	-	13 (?)	-	Non-psychiatric (irrelevant)
57.	63.	??	Massage therapy device used in e.g. hospitals, has receptacle that is provided for finger or hand of therapist and back of hand or fingers facing side of receptacle is ergometrically adjustable	??	-	18 (?)	-	Non-psychiatric (irrelevant)
EXCLUDED (No relevant therapist effect value reported):								
58.	3.	2013	Implementation of Cognitive Therapy for PTSD in routine clinical	Ehlers, A., Grey, N., Wild, J., (...), Salkovskis,	19 (1)	20 (1)	-	No therapist effect value

			care: Effectiveness and moderators of outcome in a consecutive sample	P., Clark, D.M.				reported
59.	9.	2011	Racial/ethnic disparities in therapist effectiveness: A conceptualization and initial study of cultural competence	Imel, Z.E., Baldwin, S.,Atkins, D.C., (...),Baardseth, T., Wampold, B.E.	47 (7)	44 (8)	35	No relevant therapist effect value reported
60.	15.	2015	Therapist effects, working alliance, and African American women substance users. (therapist effects in working alliance)	Davis, Telsie A; Ancis, Julie R; Ashby, Jeffrey S	-	-	1	No relevant therapist effect value reported
61.	16.	2014	Relationship between therapist empathy and client-perceived working alliance in China: A multilevel modelling analysis (TPE in working alliance)	Lei, Y., Duan, C.	5 (0)			No relevant therapist effect value reported
62.	18.	2014	Therapists' professional and personal characteristics as predictors of working alliance in short-term and long-term psychotherapies	Heinonen, E., Lindfors, O.,Härkänen, T., (...),Jääskeläinen, T., Knekt, P.	9 (0)	4 (0)		No relevant therapist effect value reported
63.	20.	2013	The contribution of the quality of therapists' personal lives to the development of the working alliance (Therapist functioning as predictors of patient outcome)	Nissen-Lie, H.A., Havik, O.E., Høglend, P.A.,Monsen, J.T., Rønnestad, M.H.	20 (0)	22 (1)	10	No relevant therapist effect value reported
64.	23.	2012	Therapist effects in the therapeutic alliance-outcome relationship: A restricted-maximum likelihood meta-analysis	Del Re, A.C., Flückiger, C.,Horvath, A.O., Symonds, D., Wampold, B.E.	31 (17)	30 (16)	20	No relevant therapist effect value reported
65.	27.	2011	Allegiance Bias and Therapist Effects: Results of a Randomized Controlled Trial of Binge Eating Disorder	Wilson, G.T., Wilfley, D.E.,Agras, W.S., Bryson, S.W.	49 (7)	46 (7)	28	No therapist effect value reported

66.	40.	2014	Therapists' positive emotions in-session: Why they happen and what they are good for	Vandenberghe, L., Silvestre, R.L.S.	8 (0)	-	-	No therapist effect value reported (qualitative study)
67.	41.	2014	Skilled therapists' experiences of how they contributed to constructive change in difficult therapies: A qualitative study	Moltu, C., Binder, P.-E.	10 (0)	-	2	No therapist effect value reported (qualitative study)
68.	42.	2014	Ten session body image therapy: Efficacy of a manualised body image therapy	Morgan, J.F., Lazarova, S.,Schelhase, M., Saeidi, S.	16 (2)	17 (1)		No therapist effect value reported
69.	48.	2011	Impact of therapist emotional intelligence on psychotherapy	Kaplowitz, M.J., Safran, J.D., Muran, C.J.	54 (4)	52 (2)	-	No therapist effect value reported
70.	66.	2014	Influence of counselor characteristics and behaviors on the efficacy of a brief motivational intervention for heavy drinking in young men-a randomized controlled trial	Gaume, J., Magill, M.,Longabaugh, R., (...),Gmel, G., Daeppen, J.-B.	15 (0)	7 (0)	-	No therapist effect value reported
71.	67.	2014	Outcome Management Using PROs in People with Severe Mental Illness: Process Evaluation, Therapist Effect, and Cost-Effectiveness	Puschner, Bernd; Bjorngaard, Johan Hakon; Becker, Thomas	-	6(0)	-	No therapist effect value reported
72.	70.	2013	Use of self-disclosure for the gay male therapist: The impact on gay males in therapy	Kronner, H.W.	25 (0)	-	-	No therapist effect value reported
73.	71.	2012	Understanding the differential impact of outcome monitoring: Therapist variables that moderate feedback effects in a randomized	de Jong, K., van Sluis, P.,Nugter, M.A., Heiser, W.J.,Spinhoven, P.	38 (12)	42 (9)	-	No therapist effect value reported

			clinical trial					
74.	72.	2012	Providing patient progress information and clinical support tools to therapists: Effects on patients at risk of treatment failure	Simon, W., Lambert, M.J.,Harris, M.W., Busath, G.,Vazquez, A.	32 (9)	-	-	No therapist effect value reported

APPENDIX II - Quality ratings of studies (Downs & Black, 1988)



MASTER INDEX ID-#	PARTICIPLES REVIEWED	DOWNS & BLACK (1998) QNo: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	TOTAL Total	
2	Ali et al (2014)	0	1	0	1	n/a	1	1	?	n/a	0	0	0	1	n/a	n/a	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	11	38 TP 35·2 Patients/TP
6	Artkoski & Saarnio (2012)	0	0	1	1	n/a	0	1	?	1	0	0	0	0	n/a	n/a	1	1	1	0	0	1	1	n/a	n/a	1	1	0	10	33 TP 9·91 Patients/TP
36	Erickson et al. (2010)	1	0	0	1	0	1	1	?	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	12	10 TP 9·1 Patients/TP
1	Green et al. (2014)	1	1	1	1	n/a	1	1	?	n/a	1	0	0	1	n/a	1	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	15	21 TP 53·55 Patients/TP
58	Hayes et al (2014)	1	1	0	0	n/a	1	1	?	n/a	0	0	0	0	n/a	n/a	1	1	1	n/a	1	1	0	n/a	n/a	1	n/a	0	10	36 TP 6·33 Patients/TP
19	Huppert et al. (2010) (Athletes)	1	1	0	1	0	1	0	?	0	1	0	0	0	n/a	n/a	1	1	1	1	1	1	1	1	0	1	0	0	13	14 TP; 11·07 Patients/TP
		1	1	1	1	0	1	0	?	0	1	0	0	0	n/a	n/a	1	1	1	1	1	1	1	0	0	1	0	0	14	13 TP; 20·54 Patients/TP
24	Knuuttila et al (2012a)	1	0	1	1	n/a	1	1	?	1	1	0	0	0	n/a	n/a	1	1	1	0	0	1	1	n/a	n/a	1	1	0	13	23 TP 9·91 Patients/TP
22	Knuuttila et al (2012b)	1	0	1	1	n/a	1	1	?	1	1	0	0	0	n/a	n/a	1	1	1	0	0	1	1	n/a	n/a	1	1	0	13	23 TP 9·91 Patients/TP
10	Kraus et al (2011)	1	1	1	0	n/a	1	0	?	n/a	0	0	0	1	n/a	n/a	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	11	696 TP 10 Patients/TP
74	Larrison & Shoppelrey (2011)	1	1	1	0	n/a	1	1	?	n/a	1	0	0	1	n/a	0	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	13	141 TP 7 Patients/TP
4	Lasko et al (2013)	1	1	1	1	n/a	1	1	?	n/a	1	0	0	1	n/a	n/a	1	1	1	1	1	1	0	n/a	n/a	1	n/a	0	15	25 TP 8·3 Patients/TP
5	Misen-Lie et al (2013)	1	1	0	1	n/a	1	1	?	n/a	1	0	0	1	n/a	0	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	13	20 TP 3·64 Patients/TP
26	Owen & Hitzeroth (2011)	1	1	1	1	n/a	1	1	?	n/a	1	0	0	0	n/a	1	1	1	1	1	1	1	0	n/a	n/a	1	n/a	0	15	23 TP 2·76 Patients/TP
17	Owen & Hitzeroth (2014)	1	1	1	1	n/a	1	1	?	n/a	1	0	0	0	n/a	1	1	1	1	1	1	1	0	n/a	n/a	1	n/a	0	15	28 TP 2·5 Patients/TP
25	Owen et al. (2012)	1	1	1	0	n/a	1	1	?	n/a	0	0	0	0	n/a	0	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	11	49 TP 7·54 Patients/TP
11	Owen et al. (2011)	1	1	1	0	n/a	1	1	?	n/a	1	0	0	0	n/a	0	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	12	31 TP 4·61 Patients/TP
64	Owen et al. (2013)	1	1	1	0	n/a	1	1	?	n/a	1	0	0	0	n/a	1	1	1	1	0	1	1	1	n/a	n/a	1	n/a	0	14	26 TP 3·5 Patients/TP
73	Pesale et al. (2012)	1	1	1	1	n/a	1	1	?	n/a	1	0	0	0	n/a	0	1	1	1	1	1	1	0	n/a	n/a	1	n/a	0	14	23 TP 2·76 Patients/TP
7	Steven & Barthan (2012)	1	1	1	0	n/a	1	1	?	n/a	1	0	0	1	n/a	n/a	1	1	1	0	1	1	0	n/a	n/a	1	n/a	1	14	149 TP 70·64 Patients/TP
46	Werbart et al. (2013)	1	0	1	1	n/a	1	1	?	n/a	1	0	0	1	n/a	0	1	1	1	0	1	1	0	n/a	n/a	1	n/a	0	13	75 TP 2·4 Patients/TP

APPENDIX III Pragmatic review of therapist effects studies: information on study contribution, setting, patient diagnosis and treatment

Author (Year)	**CONTRIBUTION(S)**	**Setting (e.g. outpatient psychiatric clinic, community psychotherapy)** **(ROS / RCT / Non-randomised trail / archival data)**	**Patient diagnosis**	**Treatment**
1. Ali et al., 2014	i) Therapist effects in patient outcome of brief low-intensity intervention ii) Sensitivity analysis (on patient severity and model levels)	One mental health service site (IAPT PWP historical data) (National health care service UK) (ROS)	Anxiety and/or Depression (patients with mean baseline anxiety and depression above threshold)	CBT (for low intensity) NHS endorsed
2. Artkoski & Saarnio, 2012	i) How therapist effect in patient outcome varies across treatment and at follow-up for the treatment of substance abuse. Naturalistic setting with random assignment of patients to therapists. ii) Therapist effects in working alliance and client satisfaction	Multisite outpatient clinic treatment study (South and West Finland) Randomisation of patients to therapists.	Substance use disorders (substance abuse during the week and history of attending clinic)	Includes Eclectic, cognitive therapies and solution-focused
3. Erickson et al., 2012	i) Therapist effects across and within treatment conditions (MET and TAU) of pregnant substance abusing patients (RCT) ii) Examination of differences in patient impression of therapist relational skill in predicting therapist effectiveness	Patients recruited in outpatient community treatment program settings (RCT)	Substance abuse	Motivational Enhancement Therapy (MET) and Treatment as usual (TAU)

4. Green et al., 2014	i) Therapist effects in patient outcome for the provision of low contact-high volume treatment. In evidence-based protocol-driven treatments. ii) TPE with study of practitioner features	Multiple (6) mental health service sites IAPT PWP historical data) (National health care service UK) (ROS)	Anxiety and/or Depression (patients with mean baseline anxiety and depression above threshold)	CBT (for low intensity) NHS endorsed
5. Hayes et al., 2014	i) Therapist effects in patients outcome ii) Therapist effects as a function of patient ethnicity.	University training clinic (Mid Atlantic university) (archival data)	Concerns included depression, anxiety, relationship issues and academic distress	Counselor education & Counseling psychology
6. Huppert et al., (2014)	i) Therapist effects in the treatment of CBT for panic disorder with agoraphobia while controlling for early symptom change. (analysis of 2 trials; S1 and S2)	Two trials of CBT for panic disorders S1: The multicentre collaborative study for the tx of panic disorder (MCSTPD) S2: The longitudinal tx strategies study (multisite)	S1: Panic Disorder with or without agoraphobia S2: Panic Disorder with or without agoraphobia	CBT only & CBT combined with imipramine/placebo pill S2: Acute phase 11 CBT sessions (less than 90 mins in length) tx delivered in less than 19 weeks.
7. Knuuttila et al., (Clinical Psychologist, 2012)	i) How therapist effect in patient outcome varies across treatment and at follow-up for the treatment of substance abuse. Naturalistic setting with random assignment of patients to therapists. ii) Therapist effects in client	Multisite outpatient clinic treatment study (South and West Finland) Randomisation of patients to therapists.	Substance use disorders (substance abuse during the week and history of attending clinic)	Includes Eclectic, cognitive therapies and solution-focused

	satisfaction			
8. Knuuttila et al., (Counseling Psychology Quarterly, 2012)	i) How therapist effect in patient outcome varies across treatment and at follow-up for the treatment of substance abuse. Naturalistic setting with random assignment of patients to therapists. ii) Working alliance as predictor of treatment retention	Multisite outpatient clinic treatment study (South and West Finland) Randomisation of patients to therapists.	Substance use disorders (substance abuse during the week and history of attending clinic)	Includes Eclectic, cognitive therapies and solution-focused
9. Kraus et al., (2011)	i) Examining the presence of effective and harmful therapists in naturalistic settings ii) Examining consistency of harmful therapists	Naturalistic treatment settings (USA) (archival dataset)	Not specified (Multiple symptom and functioning domains)	Treatment as usual (TAU)
10. Larrison & Schoppelrey, 2011	i) Therapist effect on outcome disparities of patients from racial and ethnic minority groups.	2 community mental health agencies (USA)	Depression, bipolar	TAU (A wide range of service packages that varied depending on client needs)
11. Laska et al., 2013	i) Therapist effects in patient outcome in naturalistic setting with experimental conditions implemented (i.e., training, supervision, manual use, patients formally diagnosed with one condition) ii) TPE with study of practitioner features	Speciality Veterans Affairs (hospital and outpatient clinics) (National health care service Madison, USA) (historical database)	PTSD (of Veterans) (note period of lapse) (80% medicated) (Baseline comparable with clinical trials)	Cognitive Processing therapy for PTSD (CPT) Completers of 12 sessions CPT course and completed pre and post tx assessment)) (no group tx)
12. Nissen-Lie et al., 2012	i) Therapist effects in patient outcome a naturalistic setting with limited control features (i.e.,	Multisite Study of Process and Outcome in Psychotherapy	Anxiety, depression, dysthymia, somatization,	Psychodynamic influenced treatment models (eclectic)

	variety of treatment approaches provided with no manuals, no special supervision, a range of patients) i) TPE with study of practitioner features	(Public mental health Norway) (historical data)	personality disorder(s) (GAF and GSI indicate baseline clinically poor functioning and severe psychological distress)	
13. Owen & Hilsenroth, 2011	i) Therapist effects in patients' receiving psychodynamic psychotherapy ii) Examining whether interaction between alliance and use of psychodynamic therapy predict patient outcomes (with features of training, supervision, manual use and independent rating of tx use)	Uni-based community outpatient clinic	Mood disorder and Personality related disorder(s) (mild to moderate range).	Psychodynamic therapy
14. Owen & Hilsenroth, 2014	i) Therapist effects in patient outcome ii) Examining therapist adherence within cases (patients) as a predictor of patient outcome after controlling for therapist effects. (with features of training, supervision, manual use and independent rating of tx use)	University-based community outpatient clinic ROS (not archival data	Mood disorders and/or personality related disorder(s) (Generally mild to moderate range).	Psychodynamic psychotherapy
15. Owen et al., 2012	i) Therapist effects in patients' unilateral termination ii) Examining between-therapist variability as a source of variability in patients' unilateral termination after controlling for patient and therapist variables	(West Coast) Uni counselling center (usually provides brief therapy (6-10 sessions)	Concerns of depression, disorder eating, anxiety, adjustment issues, anger, ETOH use, r/ship difficulties	Integrative therapy (e.g. psychodynamic, CB, relational, systems, cultural)

	including alliance.			
16. Owen et al., 2011	i) Therapist effects in patient outcome i) Therapist effects in patient ratings of therapists multicultural competencies	University Counselling centre (West Coast UCC) (patient recruited for this study – not from archival dataset)	(unknown)	Brief therapy (6-10 sessions). TAU
17. Owen et al., 2013	i) Therapist effects in patients outcome ii) Examining the relationships between patients' help-seeking stigmas (self-stigma and social stigma) and patient outcome and alliance.	University Counselling Centre (West Coast university)	No formal diagnosis, presenting problems of adjustment, anxiety, relationship issues, eating disorders, depression (subclinical)	TAU (integrative therapy e.g. psychodynamic, CBT, relational, systems)
18. Pesale et al., 2012	i) Therapist effects in patients outcome ii) Examining psychotherapy process (i.e., patient early session experience) as a predictor of patient outcome. (With features of training, supervision, manual use and independent rating of tx adherence)	Uni-based community outpatient psychological clinic	All patients included regardless of disorder or comorbidity (excluded actively suicidal, and/or acute patients) Mood drs (n=38), anxiety drs (n=11). Axis II PD. (Mild to moderate levels of distress and impairment)	Short Term Psychodynamic psychotherapy (STPP).
19. Saxon & Barkham, 2012	iii) How therapist effect in patient outcome varies as a function of patient severity and patient risk.	Multisite Primary care counselling and psychological therapy services (National health service UK).	Depression, anxiety (moderate and severe)	Integrative treatment approaches (person-centered, brief, CB, psychodynamic) (Planned ending and completers)

20. Werbart et al., 2013	i) Examining effects of therapy, therapist and treatment duration in naturalistic data from a Swedish public health service. (features three therapies; cognitive behavioural, psychodynamic, or integrative/eclective therapy)	Multisite outpatient psychiatric care services (Public health care, Sweden) QAPS (Quality Assurance of Psychotherapy in Sweden)	Including anxiety and mood disorders	CBT, psychodynamic, integrative/eclective therapy

Note: k = number of practitioners contributing to the intraclass correlation, m = average number of patients per practitioner. ASI = Anxiety Sensitivity Index; BASIS-32 = Behavior and Symptom Identification Scale – 32; CORE-OM = Clinical Outcomes in Routine Evaluation-Outcome Measure; GAD-7 = Generalised Anxiety Disorder 7; GAF = Global assessment of functioning; GSI = Global Severity Index; GSI-RCI = Global Severity Index – Reliable Change Index; IIP = Inventory of Interpersonal Problems; OQ-45 = Outcome Questionnaire – 45; PCL = PTSD Checklist; PEI = Patient estimate of Improvement; PDSS-IE = Panic Disorder Severity Scale Independent Evaluation; PDSS-SR = Panic Disorder Severity Scale Self Report; PHQ-9 = Patient Health Questionnaire 9; QOL = Quality of Life Inventory; SEQ = Session Evaluation Questionnaire; SOS-10 = Schwartz Outcome Scale-10; SRH = Self-Rated Health; TOP = Treatment Outcome Package

APPENDIX IV Ethics approval documents:

– NHS Ethical approval letter 1

NHS
Health Research Authority

NRES Committee East Midlands - Nottingham 1
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 8839436

08 October 2013

Ms Jo-Ann Pereira
PhD Student
Department of Psychology
The University of Sheffield
S10 2TP

Dear Ms Pereira

Study title:	**Examining characteristics of the effective practitioner within the Improving Access to Psychological Therapies (IAPT) initiative: The contribution and role of common factors**
REC reference:	**13/EM/0387**
Protocol number:	**Insurance No: NCT 12/57**
IRAS project ID:	**125592**

The Proportionate Review Sub-committee of the NRES Committee East Midlands - Nottingham 1 reviewed the above application on 08 October 2013.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the REC Assistant Rebecca Morledge, NRESCommittee.EastMidlands-Nottingham1@nhs.net.

Ethical opinion

- The Committee noted this is a research study being conducted by a student accessing the IATP database to look at recently recorded clinical outcomes.
- The Committee noted that practitioners will be asked to complete a consent form and a number of questionnaires.
- The Committee identified there may be a difficulty in recruiting professionals to take part

in the study.

- The Committee discussed that the documents for the study have not been put together particularly well.
- The Committee commented that the title on the Participant Information Sheet does not match that of the title of the study and there is no qualification of what IATP stands for.
- The Committee discussed paragraph 2 of the Patient Information Sheet. It should state purpose and not person.
- Paragraph 3 of the Patient Information Sheet appears to be a repeat of paragraph 1 and paragraph 3 does not qualify how long will be required to complete the questionnaires.
- The Committee commented that neither the full or short title of the study appears on the consent form.
- The telephone number for the researcher appears within the consent form but not their name or any further contact details.

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

1. The title on the Participant Information Sheet needs to correlate with the title of the study.

2. IAPT needs to be written in full on the Participant Information Sheet.

3. It should be clear on the Participant Information Sheet who to contact should the participant have any questions.

4. The title of the study needs to appear on the consent form.

5. The wording of Paragraph 2 of the Participant Information Sheet should be corrected to state purpose, not person.

6. It should be clear how much time will be needed to complete the questionnaires.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The documents reviewed and approved were:

Document	*Version*	*Date*
Covering Letter	Letter from Jo-Ann Pereira	30 September 2013
Evidence of insurance or indemnity	Finance and Commercial	04 September 2013
Investigator CV	Jo-Ann Pereira	10 September 2013
Investigator CV	Dr Stephen C Kellett	
Investigator CV	Michael Barkham	01 September 2013
Other: Summary Flowchart of Research Procedure Involving Participants	1.0	30 September 2013
Other: PRaCTICED Newsletter	March 2013	
Other: Practitioner Questionnaire Booklet		01 October 2013
Participant Consent Form	1.0	30 September 2013
Participant Information Sheet	1.0	30 September 2013
Protocol	1.0	30 September 2013
Questionnaire	Day-to-Day Experiences	
Questionnaire	Basic Empathy Scale	
Questionnaire	Connor-Davidson Resilience Scale (CD-RISC)	
Questionnaire	Inventory of Interpersonal Problems	
Questionnaire	Demographic Information Questionnaire	
Questionnaire: Reflecting on me as a person and as a practitioner	1.0	30 September 2013
REC application	125592/507092/1/416	29 September 2013
Referees or other scientific critique report	Signed by David Saxon	01 February 2013

Membership of the Proportionate Review Sub-Committee

The members of the Sub-Committee who took part in the review are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.
information is available at National Research Ethics Service website > After Review

13/EM/0387	Please quote this number on all correspondence

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

With the Committee's best wishes for the success of this project.

Yours sincerely

pp C Hallwell

Mr Robert Johnson
Chair

Email: NRESCommittee.EastMidlands-Nottingham1@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

"After ethical review – guidance for researchers"

Copy to: *Professor Michael Barkham*
Mr Nicholas Bell, Sheffield Health and Social Care NHS Foundation Trust

NRES Committee East Midlands - Nottingham 1

Attendance at PRS Sub-Committee of the REC meeting on 08 October 2013

Committee Members:

Name	*Profession*	*Present*	*Notes*
Reverend Keith Lackenby	Lay member	Yes	
Dr Ian Ross	Consultant Physician	Yes	
Mrs Shirley E White	Lay member	Yes	

Also in attendance:

Name	*Position (or reason for attending)*
Miss Andrea Graham	REC Coordinator
Mrs Carolyn Halliwell	REC Assistant

- ***NHS ethics approval letter 2***

NHS
Health Research Authority
NRES Committee East Midlands - Nottingham 1
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 883 9390

15 October 2013

Ms Jo-Ann Pereira
Department of Psychology
The University of Sheffield
S10 2TP

Dear Ms Pereira,

Study title:	**Examining characteristics of the effective practitioner within the Improving Access to Psychological Therapies (IAPT) initiative: The contribution and role of common factors**
REC reference:	**13/EM/0387**
Protocol number:	**Insurance No: NCT 12/57**
IRAS project ID:	**125592**

Thank you for your letter of 14th October 2013. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 08 October 2013

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Covering Letter	Email for response to conditions	14 October 2013
Participant Consent Form	2.0	14 October 2013
Participant Information Sheet	2.0	14 October 2013

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	*Version*	*Date*
Covering Letter	Letter from Jo-Ann Pereira	30 September 2013
Covering Letter	Email for response to conditions	14 October 2013
Evidence of insurance or indemnity	Finance and Commercial	04 September 2013
Investigator CV	Jo-Ann Pereira	10 September 2013
Investigator CV	Dr Stephen C Kellett	
Investigator CV	Michael Barkham	01 September 2013
Other: Summary Flowchart of Research Procedure Involving Participants	1.0	30 September 2013
Other: PRaCTICED Newsletter	March 2013	
Other: Practitioner Questionnaire Booklet		01 October 2013
Participant Consent Form	2.0	14 October 2013
Participant Information Sheet	2.0	14 October 2013
Protocol	1.0	30 September 2013
Questionnaire	Day-to-Day Experiences	
Questionnaire	Basic Empathy Scale	
Questionnaire	Connor-Davidson Resilience Scale (CD-RISC)	
Questionnaire	Inventory of Interpersonal Problems	
Questionnaire	Demographic Information Questionnaire	
Questionnaire: Reflecting on me as a person and as a practitioner	1.0	30 September 2013
REC application	125592/507092/1/416	29 September 2013
Referees or other scientific critique report	Signed by David Saxon	01 February 2013

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

13/EM/0387	**Please quote this number on all correspondence**

Yours sincerely,

Rebecca Morledge
REC Assistant

E-mail: NRESCommittee.EastMidlands-Nottingham1@nhs.net

Copy to: *Professor Michael Barkham,*
Mr Nicholas Bell, Sheffield Health and Social Care NHS Foundation Trust

- ***Local trust governance approval letter***

Sheffield City Council

Sheffield Health and Social Care NHS

NHS Foundation Trust

Medical Directorate
Research Development Unit
Fulwood House
Old Fulwood Road
Sheffield
S10 3TH

Tel: 0114 2718804
Fax: 0114 2716736

E-mail: rdu@shsc.nhs.uk
www.shsc.nhs.uk

5th November 2013

Professor Michael Barkham
Clinical Psychology Unit
Department of Psychology
The University of Sheffield
Sheffield
S10 2TP

Dear Professor Barkham

RDU ID:	**ZP89**
Full Project Title:	**Examining characteristics of the effective practitioner within the Improving Access to Psychological Therapies (IAPT) initiative: The contribution and role of common factors**
REC No:	**13/EM/0387**

I can confirm on behalf of Sheffield Health and Social Care NHS Foundation Trust that you now have **NHS Permission to start research within that Trust.**

We also advise you of the following conditions and guidance:

1. **We are required to report on and request that you notify us of the following (as soon as they are available);**
   - **The actual start date of the study and an estimated end date**
   - **The date of the first participant's first visit**
   - **The date of the last participant's first visit**
   - **The date of the last participant's last visit**
   - **The actual end date of the study**
2. The study is to be conducted in accordance with the Research Governance Framework.
3. A favourable opinion must have been given by the REC
4. All amendments (including changes to the local research team) need to be submitted in accordance with guidance in IRAS. Please also notify us of any changes to the status of your project.
5. Please note that the NHS organisation is required to monitor research to ensure compliance with the Research Governance Framework and other legal and regulatory requirements. This is achieved by selected audit of research, usually chosen randomly.
6. We recommend the enclosed documents for maintenance of your project site file to ensure all documentation is readily accessible for our audit.
7. Permission has been granted based on the following documentation:
   REC application.pdf 125592/507092/1/416
   NHS SSI Form (authorised).pdf 125592/516217/6/336/193455/283672
   NHS SSI Submission Checklist.pdf
   Cover letter - Letter from Jo-Ann Pereira.pdf
   Covering Letter - Email response to conditions.pdf

Insurance certificate.pdf
List of Approved Documents provided by NRES Committee East Midlands.pdf
Other - PRaCTICED Newsletter.pdf
Other - Practitioner Questionnaire Booklet.pdf
Other - Summary Flowchart of Research Procedure Involving Participants.pdf
Participant Consent Form.pdf
Participant Information Sheet.pdf
Questionnaire - Basic Empathy Scale.pdf
Questionnaire - Connor-Davidson Resilience Scale.pdf
Questionnaire - Day-to-day experiences.pdf
Questionnaire - Demographic Information Questionnaire.pdf
Questionnaire - Inventory of Interpersonal Problems.pdf
Questionnaire - Reflecting on me as a person and as a practitioner.pdf
REC Approval Letter.pdf
Referees or other scientific critique report.pdf
Research Protocol.pdf
Summary CV for PhD Student and Chief Investigator (J Pereira).pdf
Summary CV for statistical advisor and delegated data custodian (D Saxon).pdf
Summary CV for Supervisor (S Kellett).pdf
Summary CV for Supervisor and Principal Investigator (M Barkham).pdf

Yours sincerely

Nick Bell
Director

Enc Site File Guidance
Amendment Log

ec: Jo-Ann Pereira
Andrew Thompson

ISSUE 1 MARCH 2013

PRaCTICED *Newsletter*

Pragmatic, **Ra**ndomised **C**ontrolled **T**rial assessing the non-**I**nferiority of **C**ounselling and its **E**ffectiveness for **D**epression

Welcome to the first issue of the PRaCTICED Newsletter. The aim of this Newsletter is to keep people informed about the trial of Counselling for Depression.

This research has been awarded, subject to contract, to a research team largely based in Sheffield at the Centre for Psychological Services Research (CPSR) but also including experienced researchers from other leading UK universities.

The research will be funded by the British Association for Counselling and Psychotherapy. It will likely start in the early summer and run for 3 years.

Our plan is to produce a monthly Newsletter that will be sent electronically to all staff informing them about aspects of the trial, its progress, introducing the research team, and other related information.

This potential award and collaboration between the Trust and University is an excellent opportunity for Sheffield to make a crucial contribution to the knowledge base for the psychological therapies.

We look forward to working with you all.

Michael Barkham & *Dave Saxon*
Principal Investigator *Project Manager*

The trial title explained

The primary aim of the trial is to obtain evidence on the effectiveness of Counselling for Depression (CfD).

It is a pragmatic trial as it is being carried out within the routine setting of the Sheffield IAPT service.

The comparator treatment will be Cognitive Behaviour Therapy (CBT) as delivered in the Sheffield IAPT service.

Patients selected for the trial will stand an equal chance of receiving either CfD or CBT.

The trial is termed a non-inferiority trial as the hypothesis is that the outcomes from patients receiving CfD will not be significantly inferior to those receiving CBT.

The trial focuses on patients in the IAPT service who meet a specific threshold for the presentation of depression that is either moderate or severe.

bacp British Association for Counselling & Psychotherapy

The University Of Sheffield.

Sheffield Health and Social Care NHS NHS Foundation Trust
iapt Improving Access to Psychological Therapies

PRE-TRIAL PREPARATION

This initial issue is a short introductory Newsletter that shows everyone how we hope to keep people informed during the course of the trial.

At this stage it is important to understand that, as with all trials, there is a period of time when the funder (BACP) and the research institution (University of Sheffield) need to iron out the fine details before the contract is signed.

But this is also an important time in terms of putting in place some of the key components that will be crucial to the smooth running of the trial.

MEETINGS

We are planning two groups of meetings between the IAPT service and the research team.

- The first is a *Management Group* that will comprise Simon Bennett, a PWP liaison practitioner, Michael Barkham, & Dave Saxon. This group will focus on key operational aspects that will secure the smooth running of the trial.
- The second group is a *Practitioner Group* that will focus on practice issues in service of the trial. We envisage lead practitioners from Counselling and CBT to be represented. In addition, it is crucial that we have a representative of the PWPs.

We will also set up an *IT Group* to address specific components of the trial that are dependent on IT systems. Tom Davidson will be central to these meetings.

COUNSELLING FOR DEPRESSION TRAINING

The most immediate issue is to train all practitioners to the required standard. The first step is to progress the Counselling for Depression training and the plan is to move forward with that training in April & May.

CBT TRAINING

One of the fundamental principles of a trial is to ensure equipoise. Therefore we will also be setting up top-up training for CBT practitioners later in the year. We will update you on this as plans are firmed up.

UNDERSTANDING WHAT MAKES A PRACTITIONER EFFECTIVE

A complementary part of the trial is a focus on what makes practitioners, regardless of their theoretical model, effective. This work was flagged at the event in December and Jo-Ann Pereira will be taking forward this work. Jo-Ann says:

"My study focuses on you as practitioners – as people – and what it is that you bring to either counselling or CBT and how you then apply it in responding to your clients.

This area of work is crucial in helping us to understand what makes practitioners effective and will act as an excellent balance to the trial's focus on treatments.

I am looking forward to working with you all later in the year."

Jo-Ann Pereira
PhD student

NEXT ISSUE

In the April issue we will update on the arrangements for training and progress on the trial. Jo-Ann will also provide a fuller account of her work. We will also provide brief thumbnail sketches of the research team here in Sheffield as well as those co-applicants from beyond Sheffield

Calendar

14th March: 11.30am
Management Group: ScHARR

28th March
Practitioner Group: Time & venue to be decided

22nd, 23rd, 24th April & 2nd & 3rd May 2013
CfD training: Fulwood House (provisional)

Contributors

MICHAEL BARKHAM

Michael is Professor of Clinical Psychology and Director of the Centre for Psychological Services Research (CPSR) at the University of Sheffield.

DAVE SAXON

Dave is a Research Associate in CPSR and is the Project Manager for PRaCTICED. He previously worked in Sheffield Health and Social Care NHS Foundation Trust.

JO-ANN PEREIRA

Jo-Ann is a PhD student at the University of Sheffield being supervised by Michael Barkham & Steve Kellett. She is investigating what makes practitioners effective.

PRaCTICED *Newsletter*

Practitioner Study: Phase 1

Left: IAPT base at Carver Street, Sheffield
Below: CPSR at the Clinical Psychology Unit, University of Sheffield
Right: CPSR at the School of Health & Related Research, University of Sheffield

Welcome to the second issue of the PRaCTICED Newsletter. This issue focuses on the study by Jo-Ann Pereira that is running parallel to and complements the trial.

We will be sending out a new issue of the PRaCTICED Newsletter early in December as we head towards a start date in the New Year. But before we get there, we want to complete data collection for the Practitioner Study before Christmas - hence this Newsletter.

So, we want to hand over to Jo-Ann for her to talk about her research. She has been to a number of meetings to talk about her project and was at the Away Day on the 24th October. We think this is a good opportunity to reach everyone as we start the study.

We very much hope that as many people as possible will contribute to the study as we think that the people who deliver the interventions have a crucial role in their delivery and we want to acknowledge and appreciate their important contribution.

Thank you for your time - it is hugely appreciated.

Michael Barkham Stephen Kellett & Dave Saxon

The study: A quick guide to Phase 1

The study focuses on what each practitioner brings to their practice irrespective of their professional identity.

The study has received NHS ethical and governance approval. The responses are anonymous and participation is voluntary.

The questionnaire booklet is being mailed out now to all practitioners in the IAPT service via internal mail.

The booklet comprises 4 questionnaires focusing on:

- Mindfulness
- Empathy
- Resilience
- Interpersonal styles (the questionnaire unfortunately uses the term 'problems' but we are not viewing the items in this way)

There are 2 further forms, one about you and the other about your experience.

Please use the *freepost* envelop to return them in the **external** mail. Thank you.

Jo-Ann Pereira

bacp British Association for Counselling & Psychotherapy

The University Of Sheffield.

Sheffield Health and Social Care NHS NHS Foundation Trust

iapt Improving Access to Psychological Therapies

INTRODUCTION

I am a PhD student from The University of Sheffield and would like to thank Sheffield IAPT for endorsing my research, also for the chance to speak with many of you about my research. To each of you thank you for the encouraging interest which you have shown for this study.

As part of this research, I work with Michael Barkham, Steve Kellett, and Dave Saxon. I am supervised by Michael Barkham and Steve Kellett. Dave Saxon provides statistical advice and is our delegated data custodian.

This research has received NHS ethics approval (ref number: 13/EM/0387) and also research governance approval. All analysed responses will be kept strictly confidential and anonymous following the policies and guidelines for confidentiality and data security of The University of Sheffield and NHS ethics.

The trial appreciates the '*Science*' of Practice', with a focus on the theoretical frameworks of treatments. This study appreciates the '*Art*' of Practice', with a focus on you as practitioners – as people – and what you bring to PWP practice, counselling, and CBT.

So this study focuses on how you meld the methods you have been trained in to respond effectively to your patients.

Side-by-side, the trial and this study provide a holistic approach to study key aspects of effective routine practice.

In this study, we are asking: 'What do practitioners bring as themselves when they deliver effective practice?'

HOW ARE WE RESEARCHING THIS QUESTION?

In the hope that you participate in this research, we aim to study your responses in respect to certain *common aspects* of yourselves (resilience, mindfulness, empathy and interpersonal style) as well as your perspective of what you bring to your practice.

Together with your responses, I will be given access to Sheffield IAPT patient outcome scores from approximate dates of Oct 2010 to Sept 2013.

All information - your responses and the outcome data - will be received by Dave Saxon, who will reallocate arbitrary patient and practitioner identifiers prior to passing your responses and the Sheffield IAPT data to me.

With this process in place, I will only receive your responses, anonymized. You will not be identifiable or traceable as I do not have access to your IAPT identifiers or your IAPT patient identifiers..

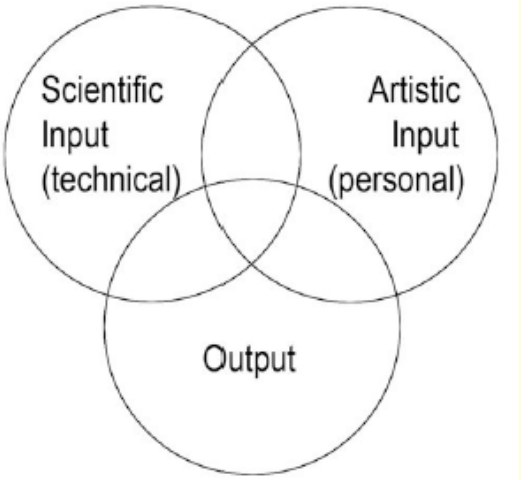


Fig. 1 : Model of the aspects of science (specific to theory) and art (common across practitioners)

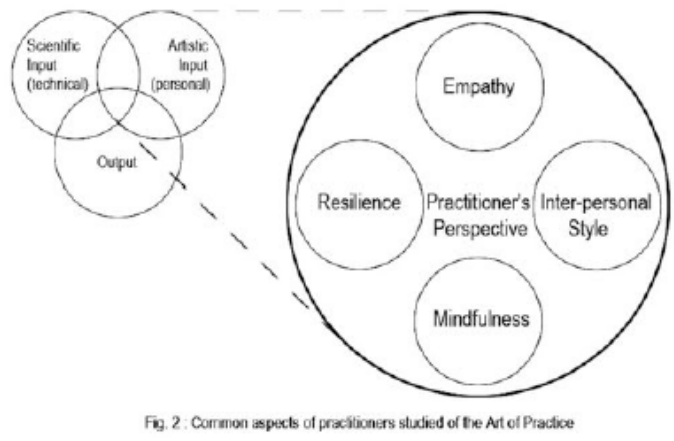


Fig. 2 : Common aspects of practitioners studied of the Art of Practice

HOW YOU CAN CONTRIBUTE TO THIS RESEARCH

The research packs are being mailed out to you this week via the Sheffield IAPT internal mail system. The pack contains:

- a research participant information sheet & a questionnaire information sheet
- a questionnaire booklet containing a consent form, 4 standardised questionnaires, and 2 additional questionnaires about you
- a *freepost* return envelope.

The 4 standardised questionnaires (see Figure 2) focus on:

- Mindfulness
- Empathy
- Resilience
- Interpersonal styles (*not* problems)

The 2 questionnaires about you comprise:

- a demographic questionnaire and an unstructured questionnaire to help us understand better what you bring to your role as a practitioner.

The consent form in the questionnaire booklet is printed on a perforated page. This is to enable ease of removal of this page. Dave Saxon will remove this page prior to passing me your completed questionnaire booklets.

On choosing to participate, you will need to complete the consent form and the questionnaires. You can choose to complete all the questionnaires at your convenience, taking breaks in between questionnaires or in one sitting. Please follow the order in which the questionnaires are set out.

When you have completed the booklet, please post it externally using the *freepost* return envelope provided.

After I have analysed the data, I will provide the service *as a whole* with feedback early next year.

More feedback will be provided at a later date on findings of common aspects you bring that are associated with effective routine practice.

AND FINALLY....

If you have any queries about my research or the questionnaires, you are welcome to contact me as follows:

phone: 0782 444 8973
email: jo.pereira@sheffield.ac.uk.

Thank you.

Jo-Ann Pereira

Contributors

JO-ANN PEREIRA

Jo-Ann is a PhD student at the University of Sheffield

WITH

MICHAEL BARKHAM, STEPHEN KELLETT, &

APPENDIX VI - Alternative Scoring of BES-A and BES-A factors

In prior analysis, consistent with the recommended scoring by the measure developers, items 1, 6, 7, 8, 13, 18, 19 and 20 were reverse scored on the designed Likert scale. Practitioner empathy is examined as a unitary construct (sum of all 19 BES-A scale items) and examined across the 3 subscale factors as identified by Carré and colleagues (2013): emotional contagion (items 2, 5, 11, 15 and 17), cognitive empathy (items 3, 6 reverse scored, 9, 10, 12, 14, 16 and 20 reverse scored), and emotional disconnection (items 1, 7, 8, 13, 18, 19 all reverse scored). Higher BES-A scores indicate higher levels of measured empathy (i.e., higher levels of emotional contagion, cognitive empathy and lower levels of emotional disconnection). For reporting purposes in this Appendix, findings on emotional disconnection are described as 'emotional connection' (i.e., higher scores on 'emotional disconnection' items reversed, reflect higher levels of empathy, reflecting higher levels of measured 'emotional connection').

Individual items scores range from 1 (*"strongly disagree"*) to 5 (*"strongly agree"*) with total BES-A scores ranging from 19 to 95 with the final scores expressed as a sum total of all item scores and total scores within each scale factor: emotional contagion, cognitive empathy and emotional connection.

APPENDIX VII Participant demographic questionnaire

Demographic Information Questionnaire

We would appreciate your assistance in providing us with some information about yourself.

The questions below are intended to:

i) provide us with demographic information of participating practitioners which will be used to describe the sample of practitioners in subsequent research publication;

ii) enable us appreciate what you bring to your practice

I. Your details:

1) Sex: ☐ Female ☐ Male

2) Ethnicity: ☐ White
☐ Mixed/Multiple ethnic groups
☐ Asian / Asian British
☐ Black/African/Caribbean/Black British
☐ Other ethnic group: Please state:
_____

3) Age: _____

II. Your training level: Professional qualification and accreditation:

4) What is your qualification for your current work at IAPT?

_____

5) What is your core profession (e.g. nurse, social worker, psychologist) that relates to your qualification?

_____

6) To what body are you accredited?

_____

7) What year did you attain your professional accreditation? _____

III. Your general life experience:

8) Have you had any personal experience ***which has meaningfully influenced you*** to become and remain a practitioner. Your personal experience can include your ***receipt of support and/or provision of support*** for people who suffer from psychological difficulties within your family, amongst friends, pre-qualification work or volunteering activities.

☐ Yes ☐ No

9) If yes, please list your experience(s) and an approximate duration and frequency of each experience:

Personal meaningful experience(s) / activities	Duration and frequency

IV. Your work experience as a qualified practitioner:

10) Please list your work experience to date as a qualified practitioner (including IAPT practice) and an approximate duration and frequency of each work experience:

Work experience	Duration and frequency

V. Your personal identification /preferences of treatment models :

11) What treatment approach or approaches (including counselling and CBT) do you most identify with?

_____

_____

12) Of your above listed treatment approach or approaches, please note each approach separately and indicate using the scale provided, the extent to which you identify with that treatment approach.

a) Treatment approach (i) : _____

Little or no identification									Strong identification
1	2	3	4	5	6	7	8	9	10

b) Treatment approach (ii) : _____

Little or no identification									Strong identification
1	2	3	4	5	6	7	8	9	10

c) Treatment approach(iii) : _____

Little or no identification									Strong identification
1	2	3	4	5	6	7	8	9	10

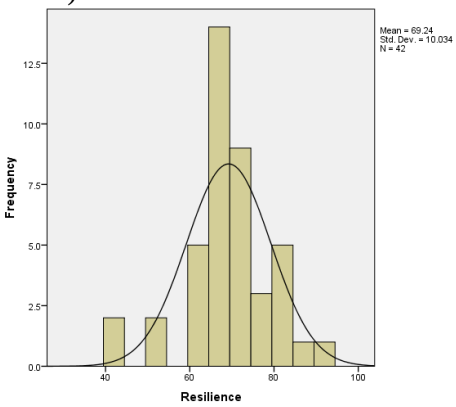
13) If you were in a situation where you decided to seek psychological intervention, what treatment model would you have and why?

Thank you for providing me with information about yourself in the questionnaire above. Your responses will enable a more transparent description of all participating practitioners. Please feel free to take a break if you prefer. The booklet will now proceed on to 4 empirically-validated structured questionnaires. Please follow the order in which the questionnaires are set out.

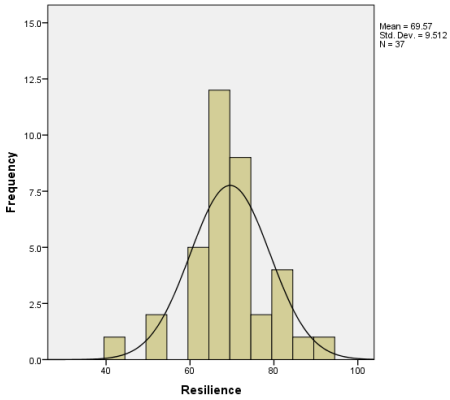
APPENDIX VIII Practitioner Aspect Histograms:

i) Resilience

(N = 42)

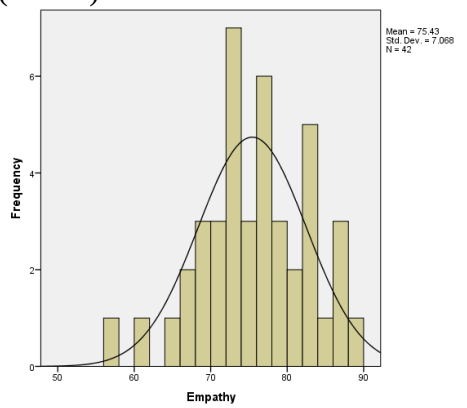


(N = 37)

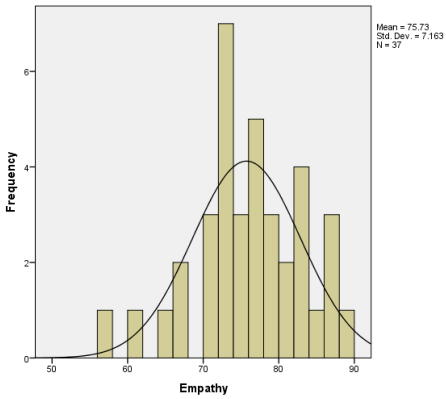


ii) Empathy

(N = 42)

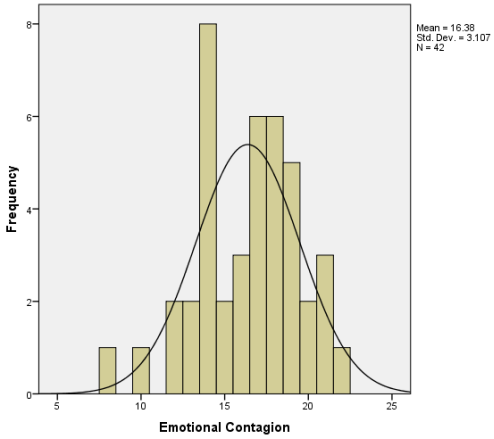


(N = 37)

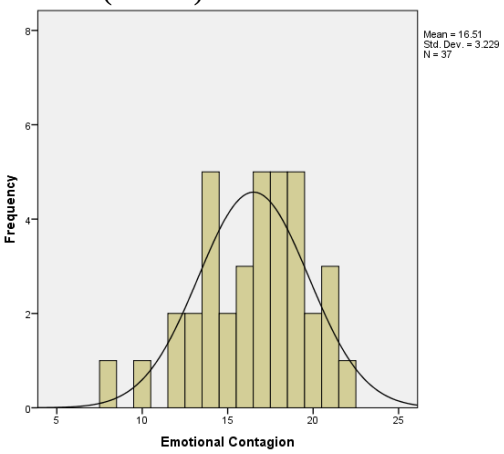


iii) Emotional Contagion

(N = 42)

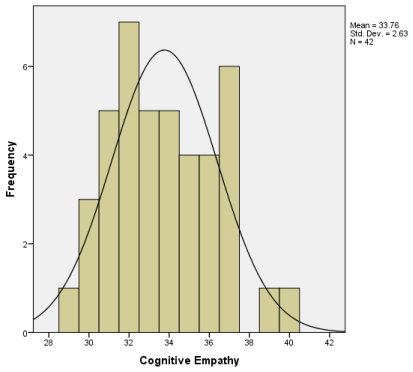


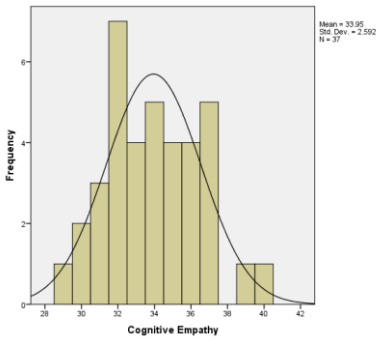
(N = 37)



iv) Cognitive Empathy

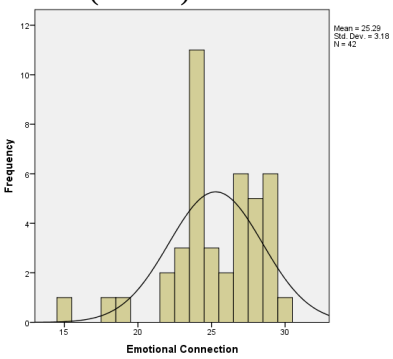
(N = 42) (N = 37)

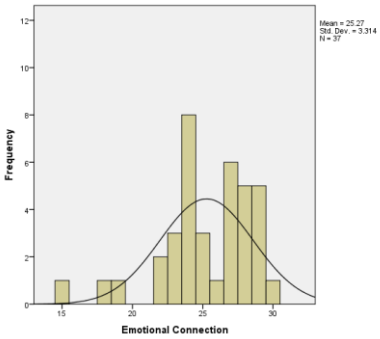




v) Emotional Connection

(N = 42) (N = 37)

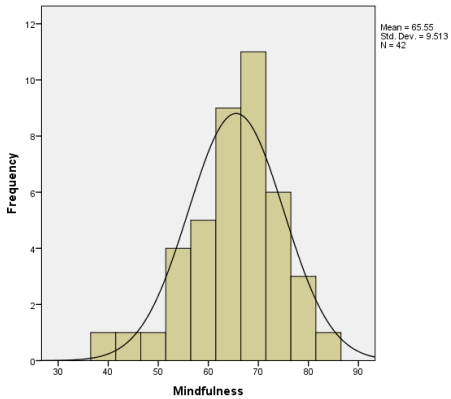


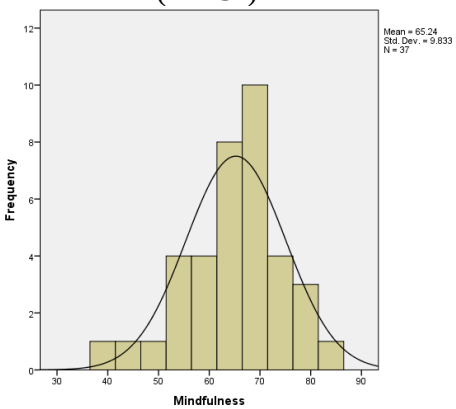


Practitioner scores on emotional connection (EC), W (42) = 0.91, p<.05 deviated from a normal distribution. Emotional connection (EC) distribution (figures above left) showed significant negative skewness and significant positive kurtosis; skewness coefficient = -1.04 (SE = 0.37), kurtosis coefficient = 1.70 (SE = 0.72). Practitioners' scores indicated a peaked distribution where there was a disproportionate frequency of scores near the distribution mean and some practitioners with scores extending away below the mean.

vi) Mindfulness

(N = 42) (N = 37)

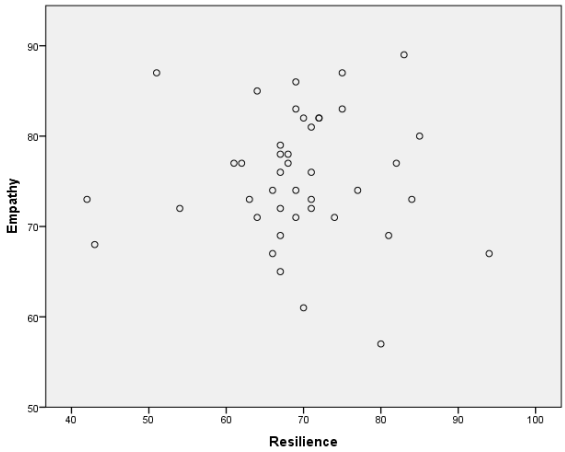




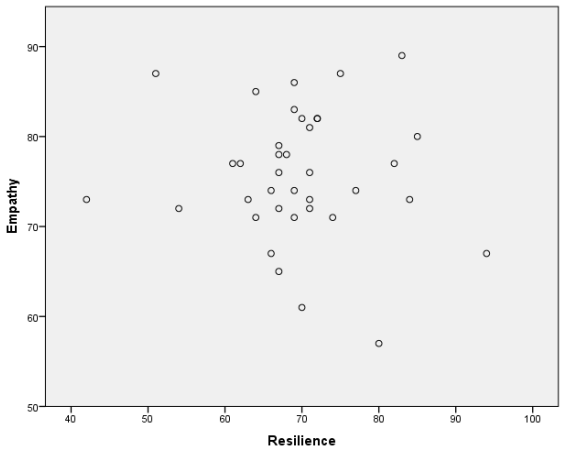
APPENDIX IX Practitioner Aspect Scatterplots:

Resilience x Empathy

(N = 42)

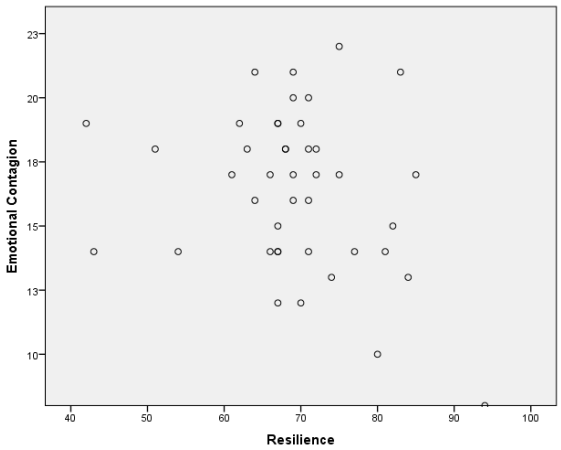


(N = 37)

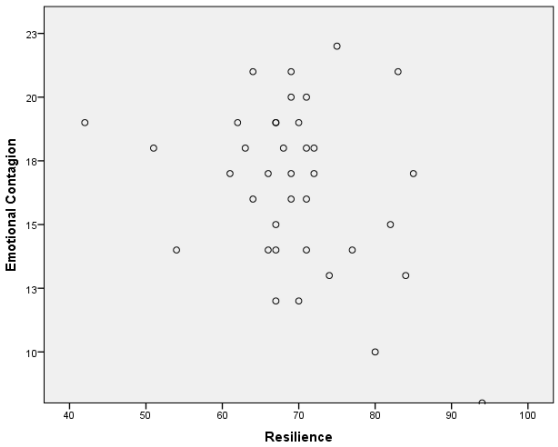


Resilience x Emotional Contagion

(N = 42)

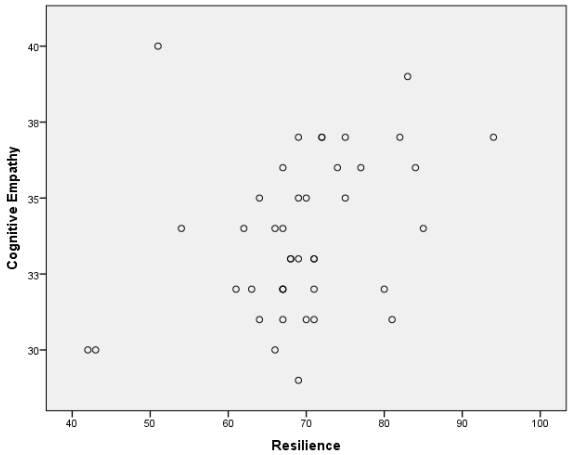


(N = 37)

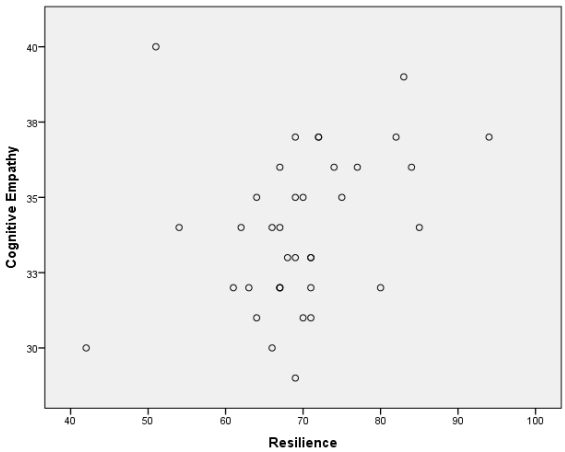


Resilience x Cognitive Empathy

(N = 42)

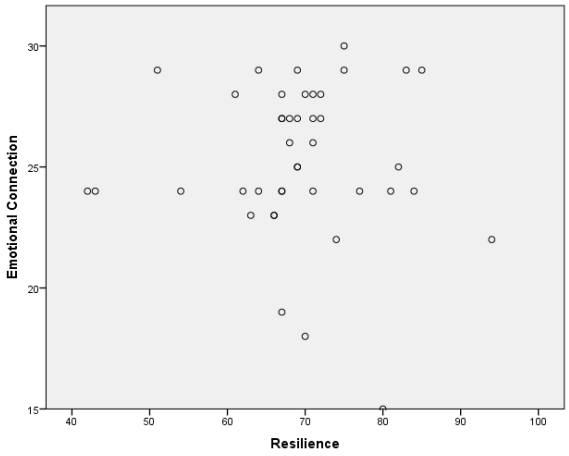


(N = 37)

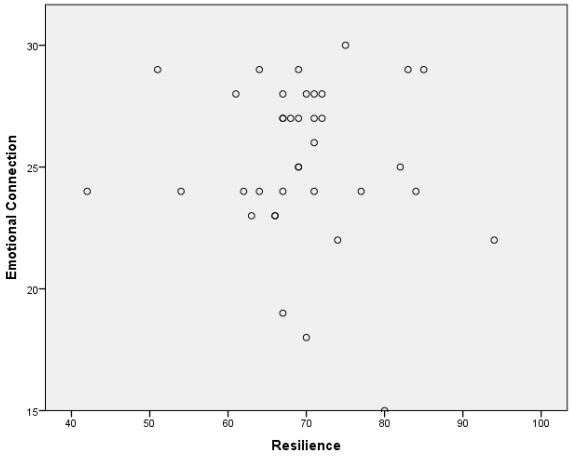


Resilience x Emotional Connection

(N = 42)

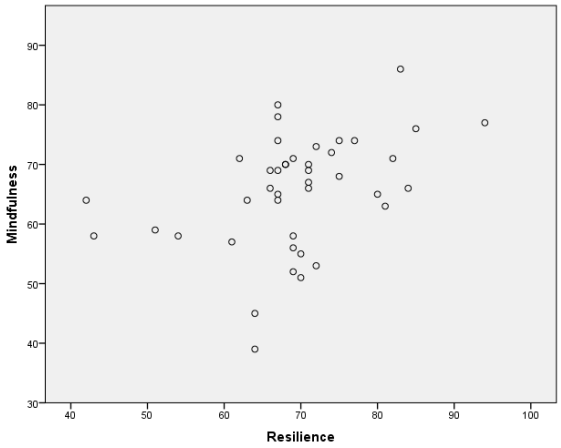


(N = 37)

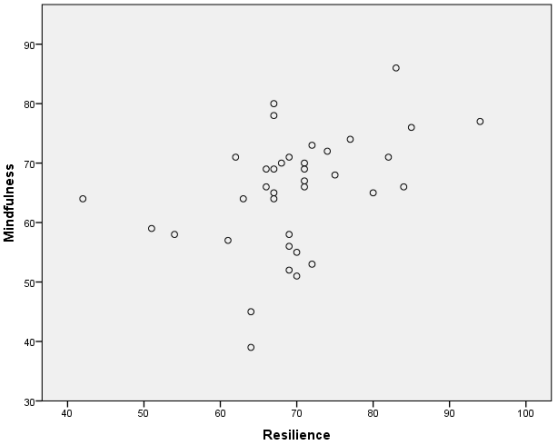


Resilience x Mindfulness

(N = 42)

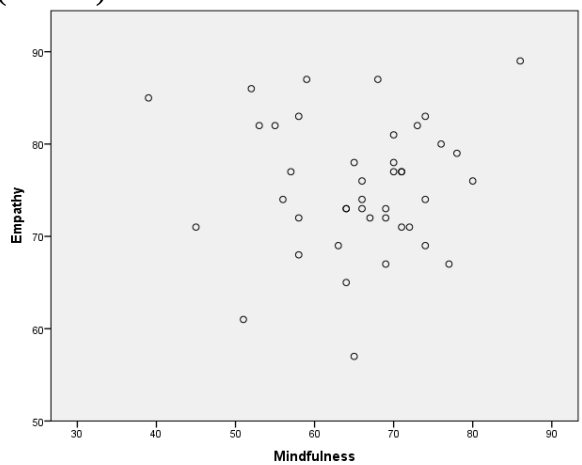


(N = 37)

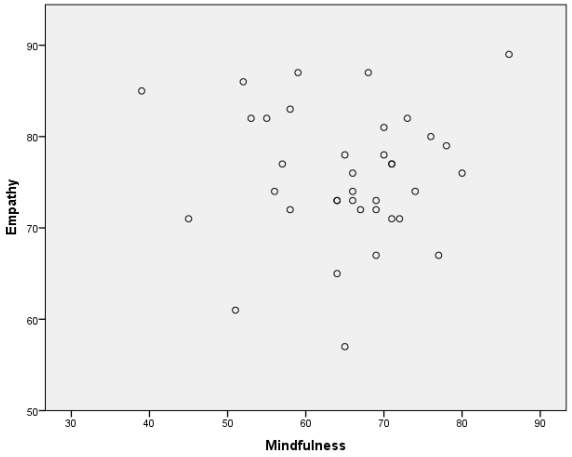


Mindfulness x Empathy

(N = 42)

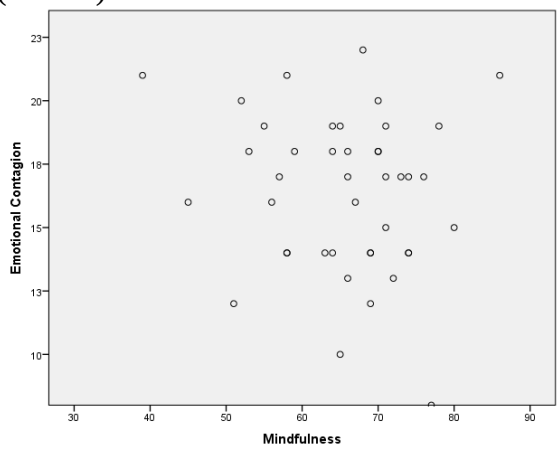


(N = 37)

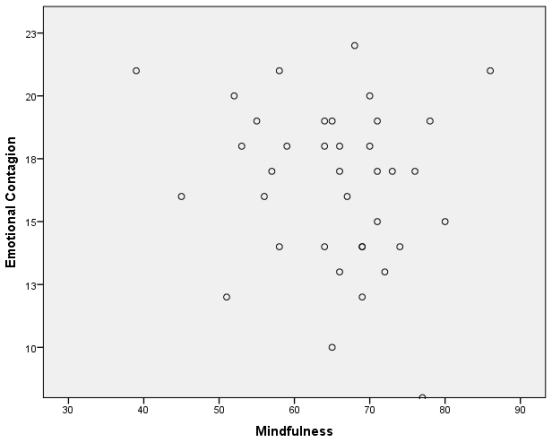


Mindfulness x Emotional Contagion

(N = 42)

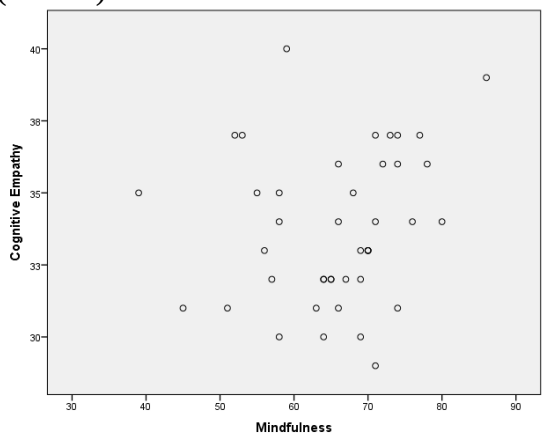


(N = 37)

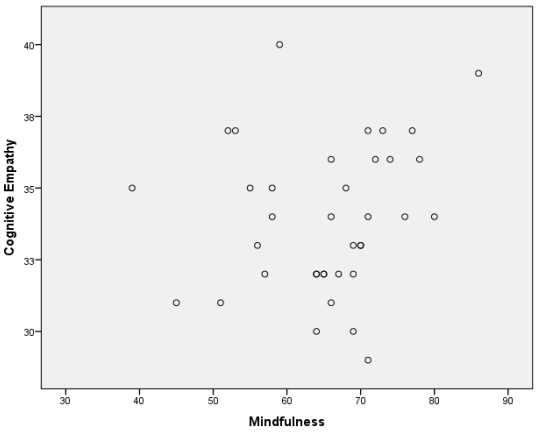


Mindfulness and Cognitive Empathy

(N = 42)

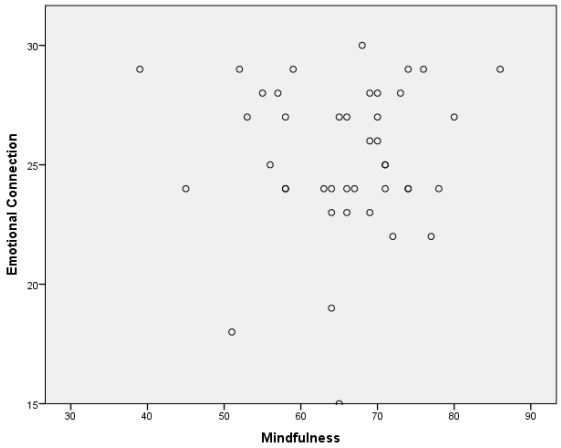


(N = 37)

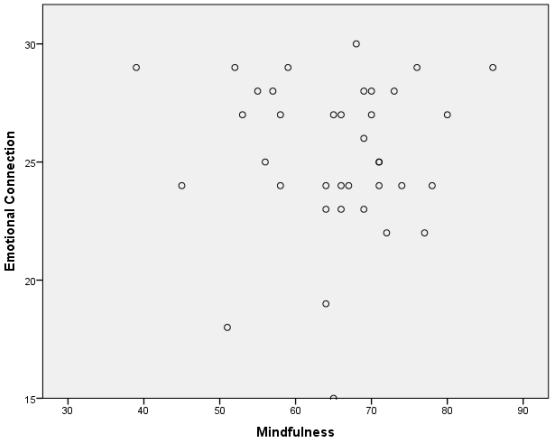


Mindfulness and Emotional Connection

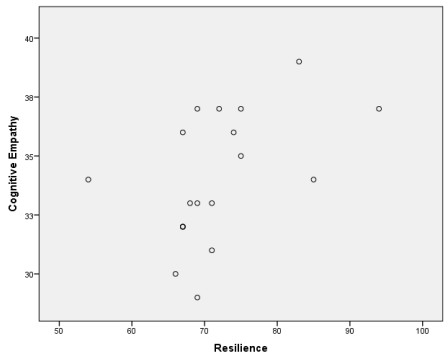
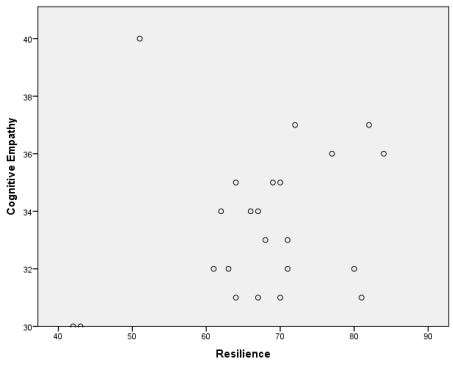
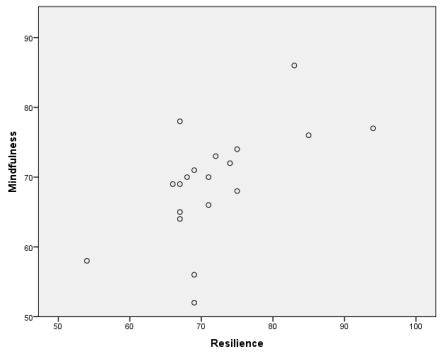
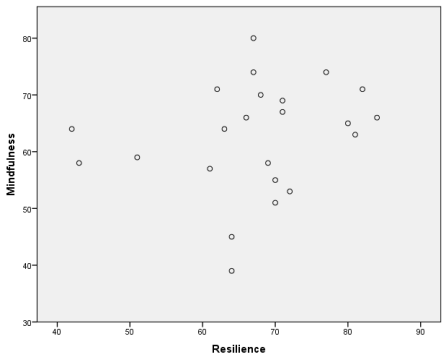
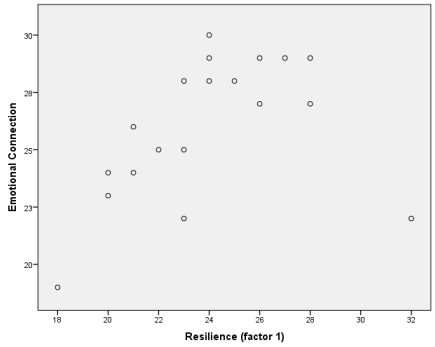
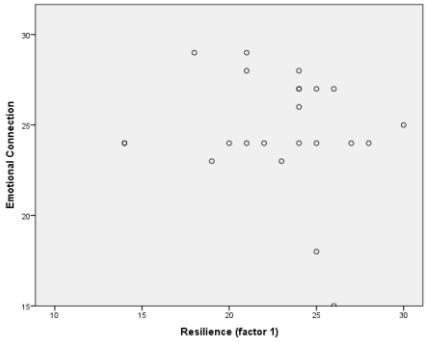
(N = 42)



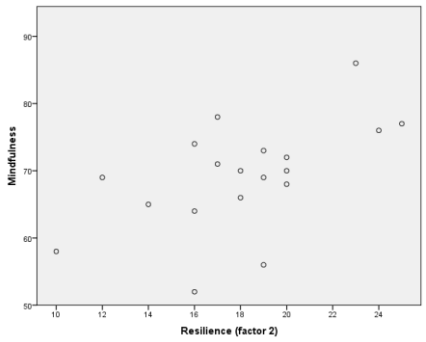
(N = 37)



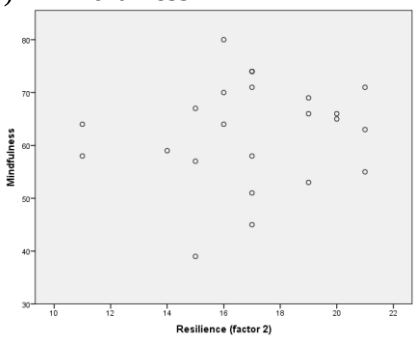
- Scatterplots related to all personal aspect combinations :

COUNSELLOR PRACTITIONERS (N = 19)	CBT & PWP PRACTITIONERS (N = 23)
Resilience x Cognitive Empathy	
	
$r_s = 0.58, p < .01$	$r_s = 0.34$, ns
Resilience x Mindfulness	
	
$r_s = 0.56, p < .05$	$r_s = 0.24$, ns
Resilience (factor 1) x Emotional Connection	
	
$r_s = 0.53, p < .05$	$r_s = -0.09$, ns

Resilience (factor 2) x Mindfulness

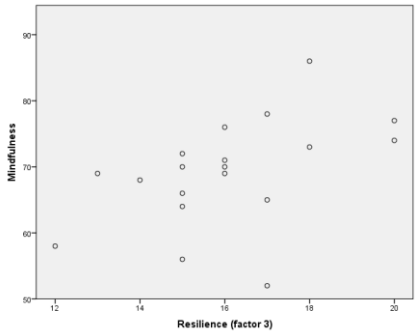


$r_s = 0.53$, $p < .01$

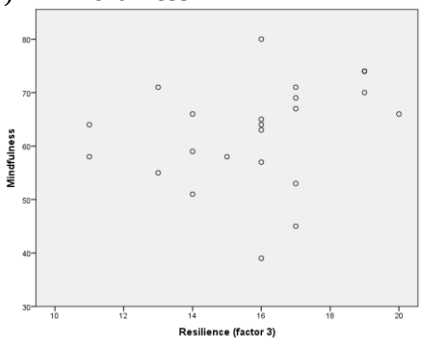


$r_s = 0.12$, ns

Resilience (factor 3) x Mindfulness

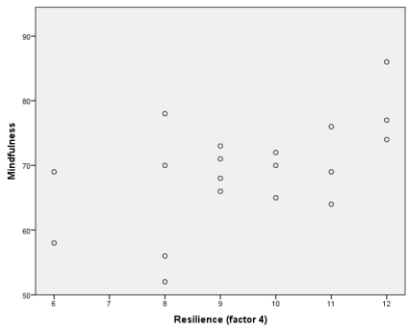


$r_s = 0.57$, $p < .05$

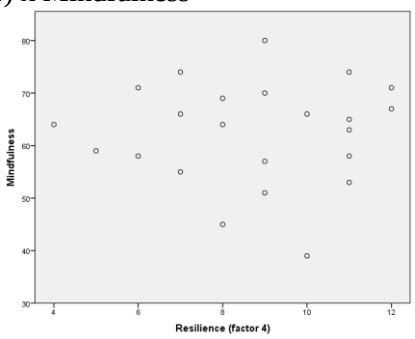


$r_s = 0.37$, ns

Resilience (factor 4) x Mindfulness

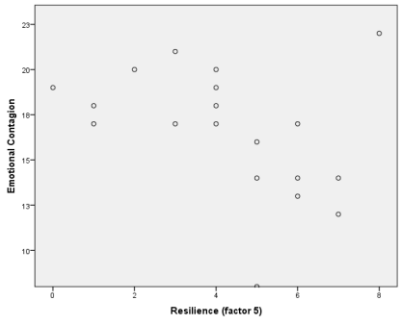


$r_s = 0.50$, $p < .05$

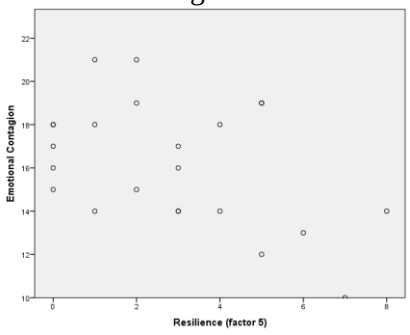


$r_s = 0.06$, ns

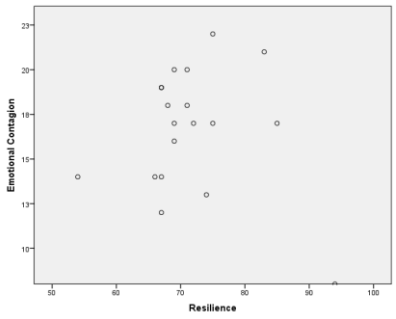
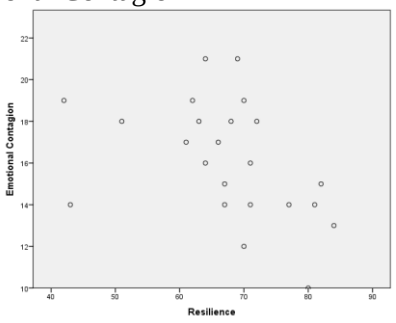
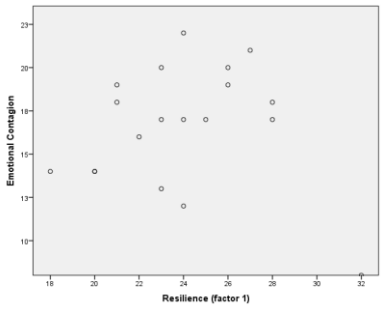
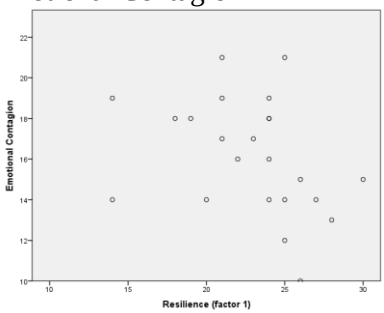
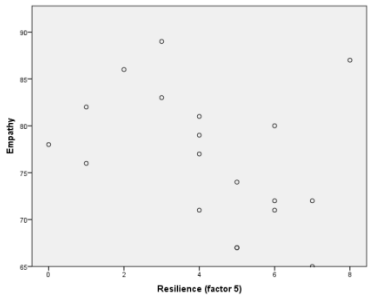
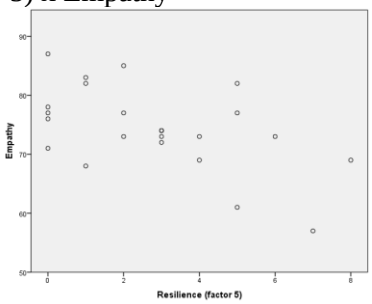
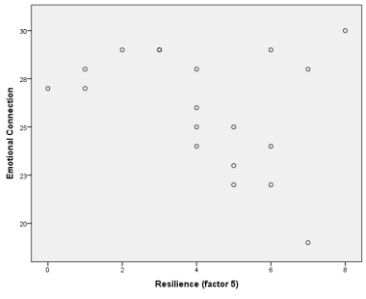
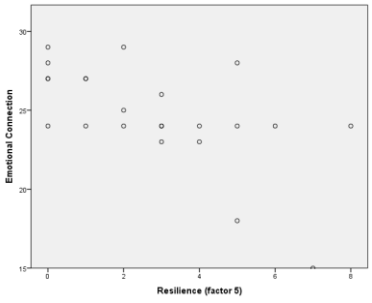
Resilience (factor 5) x Emotional Contagion



$r_s = -0.47$, $p < .05$



$r_s = -0.39$, ns

COUNSELLOR PRACTITIONERS (N = 19)	CBT & PWP PRACTITIONERS (N = 23)
Resilience x Emotional Contagion	
	
$r_s = 0.18$, ns	$r_s = -0.50$, $p < .05$
Resilience (factor 1) x Emotional Contagion	
	
$r_s = 0.22$, ns	$r_s = -0.45$, $p < .05$
Resilience (factor 5) x Empathy	
	
$r_s = -0.42$, ns	$r_s = -0.48$, $p < .05$
Resilience (factor 5) x Emotional Connection	
	
$r_s = -0.26$, ns	$r_s = -0.59$, $p < .01$

APPENDIX X

a) Correlation coefficients between practitioner aspects for all practitioner respondents (N = 42)

	2	3	4	5	6
1. Resilience	-0.004	-0.26	**0.35***	-0.43	**0.40****
			[0.12, 0.64]		**[0.11, 0.63]**
2. Empathy	-	0.82**	0.64**	0.89**	0.02
3. Emotional Contagion		-	0.21	0.68**	-0.14
4. Cognitive Empathy			-	0.40**	0.18
5. Emotional Connection				-	0.03
6. Mindfulness					-

*.Correlation is significant at the .05 level (2-tailed)

**. Correlation is significant at the .01 level (2-tailed)

Significant coefficient values between aspect measures are highlighted in bold in contrast to significant coefficient values within aspect measures which are not relevant for the purposes of the current study.

b) PWPs correlation coefficients between aspect findings (N = 11):

	2	3	4	5	6	M	(SE)
1. Resilience (R)	-0.09	-0.29	0.11	-0.12	0.20	63.27	(3.87)
2. Empathy (E)	-	0.78**	0.85**	0.93**	-0.46	74.91	(2.01)
3. Emotional Contagion (ECG)		-	0.38	0.70*	-0.61*	16.55	(0.74)
4. Cognitive Empathy (CE)			-	0.70*	-0.08	33.18	(0.94)
5. Emotional Connection (EC)				-	-0.57	25.18	(0.69)
6. Mindfulness (M)					-	60.36	(3.30)

*.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

c) CBT therapists correlation coefficients between aspect (N = 12)

	2	3	4	5	6	M	(SE)
1. Resilience (R)	-0.31	-0.60	0.49	-0.36	0.07	70.75	(2.21)
2. Empathy (E)	-	0.86**	0.61*	0.93**	0.11	73.92	(2.22)
3. Emotional Contagion (ECG)		-	0.27	0.71*	-0.06	15.83	(0.93)
4. Cognitive Empathy (CE)			-	0.45	0.14	33.83	(0.59)
5. Emotional Connection (EC)				-	0.19	24.25	(1.15)

6.	Mindfulness (M)					64.58	(2.45)

*.Correlation is significant at the .05 level (2-tailed)
*.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)
Significant coefficient values between aspect measures are highlighted in bold in contrast to significant coefficient values within aspect measures which are not relevant for the purposes of the current study. Numbers in squared parenthesis reflect 95% confidence interval values.

d) Counsellor correlation coefficients between aspects (N = 19):

	2	3	4	5	6	M	(SE)
1. Resilience (R)	0.19	-0.13	**0.47***	0.16	**0.61****	71.74	(1.95)
			[0.02, 0.76]		**[0.22 0.83]**		
2. Empathy (E)	-	0.83**	0.57*	0.86**	0.17	76.68	(1.61)
3. Emotional Contagion (ECG)		-	0.13	0.67**	0.002	16.63	(0.80)
4. Cognitive Empathy (CE)			-	0.33	0.46	34.05	(0.63)
5. Emotional Connection (EC)				-	0.09	26.00	(0.70)
6. Mindfulness (M)					-	69.16	(1.84)

*.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)
Significant coefficient values between aspect measures are highlighted in bold in contrast to significant coefficient values within aspect measures which are not relevant for the purposes of the current study. Numbers in squared parenthesis reflect 95% confidence interval values.

e) CBT and PWP practitioners (N = 23):

	7	8	9	10	11	M	(SE)
1. Resilience (R)	-0.19	**-0.42*** **[-0.71, -0.01]**	0.25	-0.25	0.22	67.17	(2.27)
2. Empathy (E)	-	0.83**	0.69**	0.91**	-0.18	74.39	(1.48)
3. Emotional Contagion (ECG)		-	0.29	0.70**	-0.33	16.17	(0.59)
4. Cognitive Empathy (CE)			-	0.47*	0.03	33.52	(0.54)
5. Emotional Connection (EC)				-	-0.13	24.70	(0.68)
6. Mindfulness (M)					-	62.57	(2.03)

*.Correlation is significant at the .05 level (2-tailed)

**. Correlation is significant at the .01 level (2-tailed)

Significant coefficient values between aspect measures are highlighted in bold in contrast to significant coefficient values within aspect measures which are not relevant for the purposes of the current study. Numbers in squared parenthesis reflect 95% confidence interval values.

APPENDIX XI Descriptive statistics (Mean and SD) of aspects and aspect factors across all and each practitioner grouping

	Sample size	Resilience (R)		Empathy (E)		Emotional Contagion		Cognitive Empathy		Emotional Connection		Mindfulness (M)		Resilience & Mindfulness (R+M)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
PWPs															
- All respondents	11	63.27	12.82	74.91	6.67	16.55	2.46	33.18	3.13	25.18	2.27	60.36	10.94	-0.80	1.07
- Yokable respondents	8	63.13	11.37	77.25	6.36	17.50	2.20	34.12	3.18	25.63	2.56	58.63	11.80	-0.80	1.07
CBT therapists															
- All / yokable respondents	12	70.75	7.67	73.92	7.70	15.83	3.22	33.83	2.04	24.25	3.98	64.58	8.48	0.03	0.73
Counsellors															
- All respondents	19	71.74	8.50	76.68	7.03	16.63	3.47	34.05	2.74	26.00	3.04	69.16	8.06	0.37	0.91
- Yokable respondents	17	71.76	8.93	76.29	7.28	16.53	3.66	33.94	2.79	25.82	3.13	68.82	8.45	0.36	0.95
CBT & Counsellors															
- All respondents	31	71.35	8.07	75.61	7.30	16.32	3.34	33.97	2.46	25.32	3.48	67.39	8.39	0.24	0.85
- Yokable respondents	29	71.34	8.30	75.31	7.42	16.24	3.44	33.90	2.47	25.17	3.53	67.07	8.58	0.22	0.87
PWPs & CBT therapists															
- All respondents	23	67.17	10.90	74.39	7.08	16.17	2.84	33.52	2.57	24.70	3.24	62.57	9.75	-0.31	0.98
- Yokable respondents	20	67.70	9.82	75.25	7.22	16.50	2.91	33.95	2.48	24.80	3.47	62.20	10.09	-0.30	0.95
All practitioners															
- All respondents	42	69.24	10.03	75.43	7.07	16.38	3.11	33.76	2.63	25.29	3.18	65.55	9.51	0.00	1.00
- Yokable respondents	37	69.57	9.51	75.73	7.16	16.51	3.23	33.95	2.59	25.27	3.31	65.24	9.83	0.00	0.99

APPENDIX XII - Quartile Benchmarking analysis across 3 patient severity change indices

A summary of the distributions of practitioners' patient change indices is provided in Table 4.5. Measures of the central tendency (mean), dispersion (SD), and distribution (skewness) of practitioner patient-change-index scores can be seen across increasing patient depression severity levels and across increasingly stringent patient-change indexes. No findings were reportable on reliable and clinical improvement of mildly depressed patients because patients with mild depression cannot demonstrate clinical improvement as their pre-treatment PHQ scores are subclinical at intake (i.e., PHQ < 10).

Identical findings were generated in respect to patient proportions across i) reliable improvement, and ii) reliable and clinically significant improvement (i.e., patient change indices 2 and 3) for patients with moderate levels of depression. Patients with moderate levels of depression (PHQ score 10-14) are similarly measured as being clinically depressed (PHQ ≥10) and any reliable improvement (PHQ ≥5) would also constitute clinical improvement; with reliable improvement, patients' PHQ scores would reduce to being < 10. Distributions based on 'all patients' reflect distributions of all patients who can demonstrate the stated improvement (i.e. PHQ ≥5 for reliable improvement: and PHQ ≥10 for all reliable and clinical improvement).

Table 4.5: Practitioner distributions of patient change

	Practitioner distribution of patient change indices (N = 37)					
	Change index 1: Mean patient pre-post change		Change index 2: Proportion of patients with reliable improvement		Change index 3: Proportion of patients with reliable and clinical improvement	
	Mean (SD)	Skewness (Std Error)	Mean (SD)	Skewness (Std Error)	Mean (SD)	Skewness (Std Error)
Mild	1.04 (1.10)	**-2.19 (.39)****	17.23 (10.85)	.67 (.39)		
Mod	3.27 (1.64)	.50 (.39)	39.25 (18.31)	.47 (.39)	39.25 (18.31)	.47 (.39)
Mod Sev	4.15 (2.18)	.44 (.39)	39.20 (15.69)	-.74 (.39)	31.47 (15.32)	.02 (.39)
Severe	5.04 (3.00)	**2.09 (.39)****	40.21 (18.78)	**1.23 (.39)****	18.67 (14.76)	**1.85 (.39)****

All patients	3.35 (1.46)	.58 (.39)	35.82 (13.01)	0.41 (.39)	29.91 (14.22)	**.91 (.39)***

* p > .05
** p > .01

Practitioners in their treatment of patients with severe depression show a significantly high positively skewed spread around the respective mean practitioner measure of patient change (skewness related to: pre-post change = 2.09, p<.01, reliable improvement = 1.23, p<.01, reliable and clinical improvement = 1.85, p<.01). This observation is of relevance in respect to traditional benchmarking of practitioners according to their quartile ranks, applied in this study. A benefit drawn from the distribution is that for the treatment of severe patients, more effective practice appears more clearly demarcated. However, quartile benchmarking is not sensitive to the irregular score distribution. In addition, the analysis violates the parametric data assumption of normality rendering the current analysis as nonparametric with findings which have limited generalizability.

Table 4.6 provides a summary of the independent t-test values comparing more effective and less effective practice for each of the patient change indices across the varying patient severity levels. The practitioner personal aspect variables that differentiated between more effective and less effective practice comprised i) Emotional Contagion (ECG), ii) Mindfulness (M), iii) combined Resilience and Mindfulness (R + M), and iv) the difference between Resilience and Cognitive Empathy (R – CE).

(Finding on Empathy and Empathy subscale factors)

Emotional Contagion significantly differed between more and less effective practice when examining reliable (or reliable and clinical) improvement of moderately depressed patients, t (16) = 2.18, p < .05. More effective practice was related to practitioners being significantly less emotionally affected (M = 15.67, SD = 2.60) in contrast to less effective practice where practitioners appear relatively more emotionally affected (M = 18.11, SD = 2.15).

(Findings on Resilience and Cognitive Empathy)

Analysis of variables which looked at the relationship between Resilience and Cognitive Empathy variables found that for moderately depressed patients, more effective practice showed higher levels

of resilience relative to cognitive empathy consistently across the different indexes of patient change. Based on pre-post treatment score change, t (16) = -2.19, p <.05, practitioners' mean Resilience was greater than practitioners' mean Cognitive Empathy for more effective practice (indicated by a positive difference value), M = 0.75 (SD = 0.78), while mean Resilience was less than mean Cognitive Empathy for less effective practice (indicated by a negative difference value), M = -0.61 (SD = 1.69). When examining reliable improvement for the same patient severity level, practitioners' mean Resilience was similarly greater than practitioners' mean Cognitive Empathy for more effective practice, M = 0.61, SD = 0.76, in contrast to that of less effective practice M = -0.70, SD = 1.52, t (16) = -2.33, p <.05. A significant difference in this practitioner personal aspect variable was also found between more effective and less effective practice for treatment of mild depression, specific to reliable improvement, t (16) = -2.26, p <.05; M = 0.69 (SD = 1.05), M = -0.75 (SD = 1.60).

(Findings on mindfulness)

When examining practitioners' mean patient pre-post change across all patients, more effective practice was associated with significantly higher levels (t (16) = -2.55, p <.05) of Mindfulness (M = 68.44, SD = 6.64) relative to Mindfulness levels associated with less effective practice (M = 58.22, SD = 10.04),. A significant difference in Mindfulness across all patients was similarly found when using a more stringent patient change index of reliable improvement; Mindfulness levels of more effective practice (M = 70.89, SD = 4.43) was significantly higher (t (16) = -2.56, p < .05) than Mindfulness levels of less effective practice (M = 59.78, SD = 12.24). There was no significant difference in Mindfulness using the patient change index of reliable and clinical improvement, (t (16) = -2.06, ns).

For the treatment of mildly depressed patients, Mindfulness significantly differentiated between more effective and less effective practice only when measuring the least stringent (pre-post) patient change index. More effective practice showed a significantly (t (16) = -2.37, p < .05) higher level of Mindfulness (M = 71.11, SD = 4.31) in contrast the less effective practice (M = 64.67, SD = 6.93). As analysis continued to look at the next patient severity group (i.e. patients with moderate

depression), a consistent finding of no significant differences in Mindfulness were found when comparing more effective with less effective practice across all patient change indexes.

Table 4.6: Findings comparing practitioner personal aspects between more effective and less effective practice groups

	Group Sample Size		Practitioner Patient Change Indexes (N = 37)									
	Upper Quartile	Lower Quartile	Change Index 1: Mean patient pre-post change (t-test values)									
			R	E	ECG	CE	EC	M	R + M	R - M	R + CE	R - CE
All patients	9	9	-1.73	-0.18	0.86	-0.42	-0.69	**-2.55***	**-2.83***	0.37	-1.41	-0.92
Mild	9	9	-0.88	0.18	-0.56	1.23	-0.07	**-2.37***	-1.50	0.20	0.06	-1.68
Mod	9	9	-1.44	1.26	1.71	0.97	0.41	-0.52	-1.18	-0.91	-0.35	**-2.19***
Mod Sev	9	9	-2.00	-0.32	0.41	-0.80	0.36	**-2.16***	**-2.62***	0.04	-1.76	-0.96
Severe	9	9	-1.26	0.12	0.98	0.16	-0.70	**-2.93***	**-2.73***	1.01	-0.71	-0.95
			Change Index 2: Proportion of patients with reliable improvement (t-test values)									
			R	E	ECG	CE	EC	M	R + M	R - M	R + CE	R - CE
All patients (PHQ ≥5)	9	9	-1.70	-0.32	0.25	-0.45	-0.50	**-2.56***	**-2.83***	0.53	-1.48	-0.90
Mild	9	9	-1.89	0.65	-0.40	0.88	0.97	-1.70	**-2.17***	-0.70	-0.59	**-2.26***
Mod	9	9	-1.55	1.64	**2.18***	1.07	0.88	-0.78	-1.39	-0.50	-0.24	**-2.33***
Mod Sev	9	9	-1.52	-0.75	-0.48	-0.95	-0.49	**-2.19***	**-2.39***	0.58	-1.59	-0.42
Severe	9	9	-1.90	-0.72	0.38	-0.97	-1.18	**-4.29****	**-3.83****	1.24	-1.91	-0.72
			Change Index 3: Proportion of patients with reliable and clinical improvement. (t-test values)									
			R	E	ECG	CE	EC	M	R + M	R - M	R + CE	R - CE
All patients	9	9	-1.73	-0.23	0.52	0.00	-0.90	-2.06	**-2.50***	0.20	-1.14	-1.26
(PHQ ≥10)												
Mod	9	9	-1.55	1.64	**2.18***	1.07	0.88	-0.78	-1.39	-0.50	-0.24	**-2.33***
Mod Sev	9	9	-1.42	-0.39	0.16	-0.25	-0.75	-1.74	-1.93	0.05	-1.10	-1.04
Severe	9	9	-1.47	-0.46	-0.27	0.16	-0.93	**-2.63***	**-2.60***	0.55	-0.86	-1.22

R = Resilience; E = Empathy; ECG = Emotional Contagion; CE = Cognitive Empathy; EC = Emotional Connection; M = Mindfulness; R + M = Standardised R + Standardised M; R – M = Standardised R – Standardised M; R + CE = Standardised R + Standardised CE; R –CE = Standardised R - Standardised CE

* $p < 0.05$

** $p < 0.01$

For the treatment of patients with moderate severe depression, more effective practice and less effective significantly differed on Mindfulness when measuring less stringent patient change indexes (i.e. pre-post and reliable improvement). This finding was not replicated when looking at the most stringent measure of patient change (i.e. patients reliable and clinical improvement), t (16) = -1.74, p = ns. Based on pre and post change of moderate severely depressed patients, more effective practice displayed significantly (t (16) = -2.16, $p < .05$) higher levels of Mindfulness (M = 70.33, SD = 8.09) in contrast to less effective practice (M = 59.78, SD = 12.24). More effective practice measured by reliable improvement of patients with moderate severe depression showed significantly (t (16) = -2.19, $p < .05$) higher levels of Mindfulness (M = 70.56, SD = 8.28) in contrast to Mindfulness of less effective practice when similarly measured by reliable improvement of patients with moderate severe depression (M = 59.78, SD = 12.24).

In respect to treatment of severely depressed patients, consistent findings on Mindfulness were evident across all patient change indexes. More effective practice in the treatment of patients with severe depression had significantly higher levels of Mindfulness in contrast to less effective practice. More effective practice based on pre-post change of severely depressed patients was associated with a mean Mindfulness score of 69.00 (SD = 6.42) relative to a lower level of Mindfulness related to less effective practice with a mean score of 57.56 (SD = 9.80), t (16) = -2.93, p = .01. When effective practice for this patient group was measured on patients' reliable improvement, more effective practice was associated with a more highly significant difference between a higher level of Mindfulness (M = 73.67, SD = 5.57) in contrast Mindfulness related to less effective practice (M = 57.56, SD = 9.80), t (16) = -4.29, p = 0.001. In consideration of the most stringent patient change index, more effective practice based on patients' reliable and clinical improvement was also related to a significantly higher level of Mindfulness (M = 70.44, SD = 7.38) in contrast Mindfulness related to less effective practice (M = 59.67, SD = 9.82), t (16) = -2.63, $p < .05$.

(Findings on combined Resilience and Mindfulness)

When treating all patients, more effective practice showed significantly higher levels of combined Resilience and Mindfulness in contrast to the combined personal aspects related to less effective

practice across all patient change indexes. For pre-post patient change index, combined Resilience and Mindfulness revealed a significantly ($t(16) = -2.83$, $p < .05$) higher mean value associated with more effective practice ($M = 0.50$, $SD = 1.18$), in contrast to lower mean value related to less effective practice ($M = -1.36$, $SD = 1.57$). Looking at reliable patient improvement, more effective practice similarly showed a significantly ($t(16) = -2.83$, $p < .05$) higher mean value for the combined Resilience and Mindfulness variable ($M = 0.75$, $SD = 1.03$) in contrast to the combine personal aspect mean value for less effective practice ($M = -1.19$, $SD = 1.77$). For the most stringent patient change index, more effective practice identified a significantly ($t(16) = -2.50$, $p < .05$) higher level of the combined personal aspects ($M = 0.57$, $SD = 1.13$) in contrast to the same for less effective practice ($M = -1.19$, $SD = 1.77$).

When treating mildly depressed patients, more effective practice shows significantly ($t(16) = -2.17$, $p < .05$) higher levels of combined Resilience and Mindfulness ($M = 1.06$, $SD = 1.26$) in contrast to that of less effective practice ($M = -0.52$, $SD = 1.78$), only when patients' reliable improvement was measured. There was no evidence of significant differences of the combined personal aspects for this patient group when patient change is measured using a less stringent (i.e. pre-post change) method, $t(16) = -1.50$, ns.

In relation to treating moderately depressed patients, there were no findings indicating that more effective and less effective practice differed in relation to combined levels of Resilience and Mindfulness. This finding is consistent across all patient change indexes; pre-post change, $t(16) = -1.18$, ns, and reliable or reliable and clinical improvement, $t(16) = -1.39$, ns.

More effective practice in treating patients with moderately severe depression showed higher levels of combined Resilience and Mindfulness relative to the combined personal aspects present in less effective practice. These findings were evident across the less stringent patient change indexes (i.e. pre-post change and reliable improvement). In respect to patient pre-post change, combined Resilience and Mindfulness showed a significantly ($t(16) = -2.62$, $p < .05$) greater value for more effective practice ($M = 0.93$, $SD = 1.67$) relative to combined Resilience and Mindfulness related to less effective practice ($M = -1.19$, $SD = 1.77$). Based on patients' reliable improvement, more

effective practice similarly found that combined Resilience and Mindfulness levels was significantly (t (16) = -2.39, p < .05) higher (M = 0.64, SD = 1.46) compared to the combined personal aspects of less effective practice (M = -1.19, SD = 1.77). Combined Resilience and Mindfulness did not significantly differ between more effective and less effective practice when looking at reliable and clinical improvement of patients with moderate severe depression, t (16) = -1.93, ns.

When treating severely depressed patients, more effective practice showed significantly higher levels of combined Resilience and Mindfulness regardless of the varying stringency of the patient change indexes examined. When patient change index for this patient group was measured by pre-post patient change, more effective practice showed a combined personal aspect mean value of 0.45 (SD = 1.02) in contrast to that of less effective practice (M = -1.30, SD = 1.63), t (13.45) = -2.73, p < .05. In respect to reliable improvement for severely depressed patients, the difference between combined Resilience and Mindfulness of more effective relative to less effective practice was more highly significant, t (16) = -3.83, p = 0.001 with a mean value for more effective practice of 1.22 (SD = 1.26) compared to a mean value for less effective practice of 1.36 (SD = 1.58). Looking at patient reliable and clinical change of severely depressed patients, more effective practice showed a combined Resilience and Mindfulness mean value of 0.73 (SD = 1.13) in contrast to the that of less effective practice (M = -1.13, SD = 1.82), t (16) = -2.60, p < .05. A summary of findings from Table 4.6 is reflected in Figure 4.4.

Figure 4.4: Summary of unique practitioner personal aspects associated with more effective practice in contrast to less effective practice (following from quartile benchmarking analysis):

<table>
<tr><th></th><th>MILD DEPRESSION</th><th>MODERATE</th><th>MODERATE SEVERE</th><th>SEVERE</th></tr>
<tr><td>Reliable and Clinical patient change</td><td>(N.A)</td><td rowspan="2">Lower ECG
Higher R - CE</td><td>(NIL)</td><td rowspan="4">Higher R + M
Higher M</td></tr>
<tr><td>Reliable patient change</td><td>Higher R - CE
Higher R + M</td><td rowspan="2">Higher R + M
Higher M</td></tr>
<tr><td>Pre-post patient change</td><td>Higher M</td><td>Higher R - CE</td></tr>
<tr><td>All patient change indexes</td><td>(NIL)</td><td>Higher R - CE</td><td>(NIL)</td></tr>
<tr><td>All patients for all patient change</td><td colspan="4">Higher R + M</td></tr>
</table>

indexes	

APPENDIX XIII PWPs correlation coefficients between aspect findings (N = 8):

	2	3	4	5	6
1. Resilience (R)	-0.18	-0.50	0.11	-0.16	0.14
2. Empathy (E)	-	0.64	0.78*	0.96**	-0.42
3. Emotional Contagion (ECG)		-	-0.05	0.67	-0.64
4. Cognitive Empathy (CE)			-	0.66	0.05
5. Emotional Connection (EC)				-	-0.60
6. Mindfulness (M)					-

*

.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

Correlation coefficients between practitioner aspect for all PWP respondents (N = 11) and (N = 8):

	1	2	3	4	5	6	M	(SE)
1. Resilience (R)	-	-0.09	-0.29	0.11	-0.12	0.20	63.27	(3.87)
2. Empathy (E)	-0.18	-	0.78**	0.85**	0.93	-0.46	74.91	(2.01)
3. Emotional Contagion (ECG)	-0.50	0.64	-	0.38	0.70*	-0.61*	16.55	(0.74)
4. Cognitive Empathy (CE)	0.11	0.78*	-0.05	-	0.70*	-0.08	33.18	(0.94)
5. Emotional Connection (EC)	-0.16	0.96**	0.67	0.66	-	-0.57	25.18	(0.69)
6. Mindfulness (M)	0.14	-0.42	-0.64	0.05	-0.60	-	60.36	(3.30)

Note: Intercorrelations for

all PWP participants (N = 11) are presented above the diagonal, and intercorrelations for yokable PWP practitioners (N = 8) are presented below the diagonal. Means and standard errors for all participants are displayed in the vertical columns, and means and standard errors for yokable participants are presented in the horizontal rows.
*. Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

CBT therapists correlation coefficients between aspect (N = 12)

	2	3	4	5	6	M	(SE)
1. Resilience (R)	-0.31	-0.60	0.49	-0.36	-0.07	70.75	(2.21)
2. Empathy (E)	-	0.86**	0.61*	0.93**	0.11	73.92	(2.22)
3. Emotional Contagion (ECG)		-	0.27	0.71*	-0.06	15.83	(0.93)
4. Cognitive Empathy (CE)			-	0.45	0.14	33.83	(0.59)
5. Emotional Connection (EC)				-	0.19	24.25	(1.15)
6. Mindfulness (M)					-	64.58	(2.45)

*.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

Counsellor correlation coefficients between aspects (N = 17):

	2	3	4	5	6	M	(SE)
1. Resilience (R)	0.18	-0.13	0.46	0.15	**0.61****		
2. Empathy (E)	-	0.84**	0.55*	0.85**	0.14		
3. Emotional Contagion (ECG)		-	0.13	0.68**	-0.01		
4. Cognitive Empathy (CE)			-	0.22	0.32		
5. Emotional Connection (EC)				-	0.06		
6. Mindfulness (M)					-		

*.Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

Correlation coefficients between practitioner aspect for Counsellor respondents (N = 19) and (N = 17):

	1	2	3	4	5	6	M	(SE)
1. Resilience (R)	-	0.19	-0.13	**0.47***	0.16	**0.61****	71.74	(1.95)
2. Empathy (E)	0.18	-	0.83**	0.57*	0.86**	0.17	76.68	(1.61)
3. Emotional Contagion (ECG)	-0.13	0.84**	-	0.13	0.66**	0.002	16.63	(0.80)
4. Cognitive Empathy (CE)	0.46	0.55*	0.13	-	0.27	0.34	34.05	(0.63)
5. Emotional Connection (EC)	0.15	0.85**	0.68**	0.22	-	0.09	26.00	(0.70)
6. Mindfulness (M)	**0.61****	0.14	-0.01	0.32	0.06	-	69.16	(1.84)

Note: Intercorrelations for all Counsellor participants (N = 19) are presented above the diagonal, and intercorrelations for yokable Counsellor practitioners (N = 17) are presented below the diagonal. Means and standard errors for all participants are displayed in the vertical columns, and means and standard errors for yokable participants are presented in the horizontal rows.
*. Correlation is significant at the .05 level (2-tailed)
**. Correlation is significant at the .01 level (2-tailed)

CBT and PWP practitioners (N = 20):

	2	3	4	5	6	M	(SE)
1. Resilience (R)	-0.31	**-0.58****	0.22	-0.31	0.21		
2. Empathy (E)	-	0.81**	0.65**	0.94**	-0.17		
3. Emotional Contagion (ECG)		-	0.18	0.71**	-0.32		
4. Cognitive Empathy (CE)			-	0.49*	0.07		
5. Emotional Connection (EC)				-	-0.13		
6. Mindfulness (M)					-		

*.Correlation is significant at the .05 level (2-tailed)

**. Correlation is significant at the .01 level (2-tailed)

Correlation coefficients between practitioner aspect for CBT and PWP practitioner respondents (N = 23) and (N = 20):

	1	2	3	4	5	6	M	(SE)
1. Resilience (R)	-	-0.19	**-0.42***	0.25	-0.25	0.22	67.17	(2.27)
2. Empathy (E)	-0.31	-	0.83**	0.69**	0.91**	-0.18	74.39	(1.48)
3. Emotional Contagion (ECG)	**-0.58****	0.81**	-	0.29	0.70**	-0.33	16.17	(0.59)
4. Cognitive Empathy (CE)	0.22	0.65**	0.18	-	0.47*	0.03	33.52	(0.54)
5. Emotional Connection (EC)	-0.31	0.94**	0.71**	0.49*	-	-0.13	24.70	(0.68)
6. Mindfulness (M)	0.21	-0.17	-0.32	0.07	-0.13	-	62.57	(2.03)

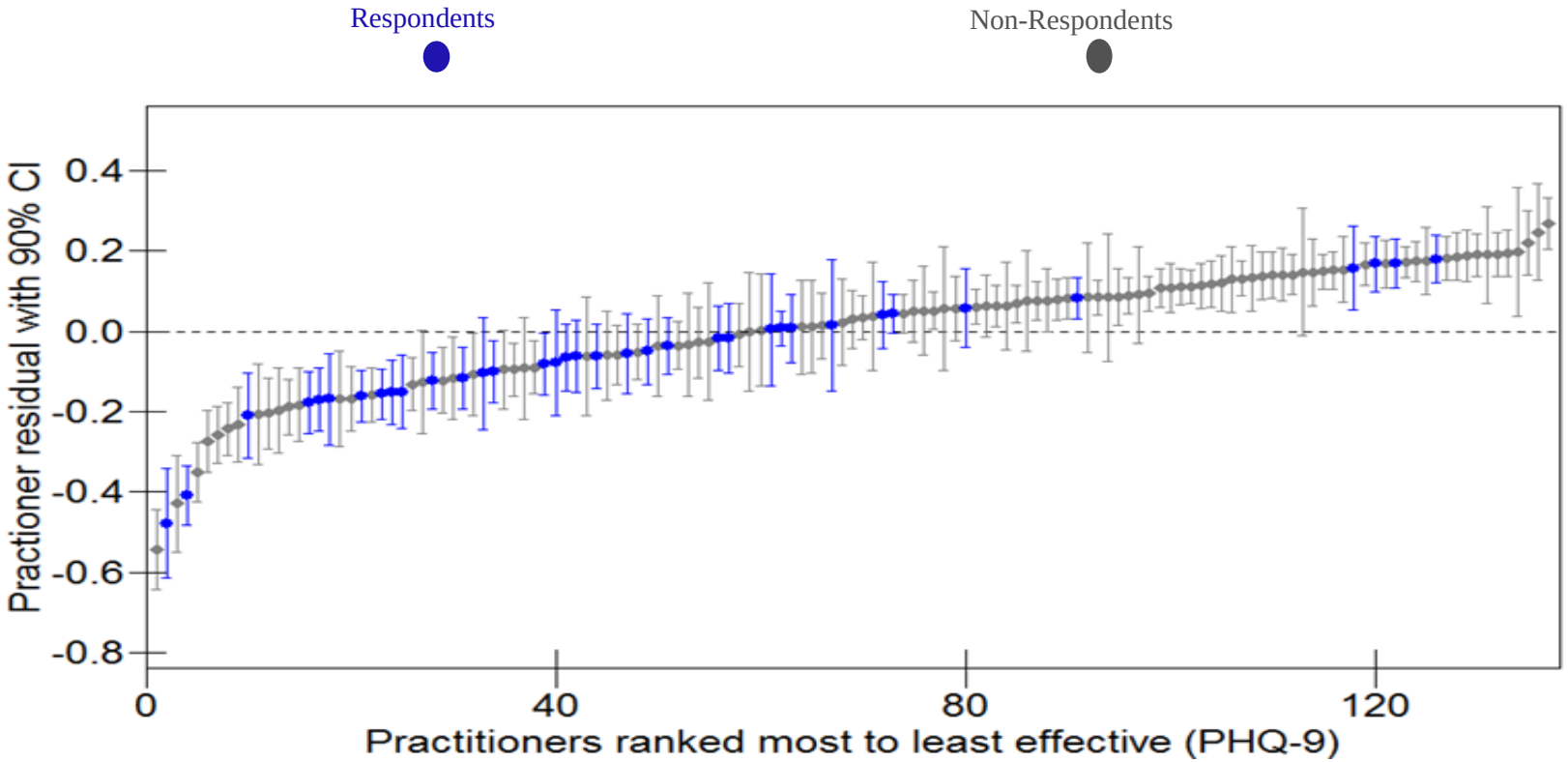
Note: Intercorrelations for all CBT and PWP participants (N = 23) are presented above the diagonal, and intercorrelations for yokable CBT and PWP practitioners (N = 20) are presented below the diagonal. Means and standard errors for all participants are displayed in the vertical columns, and means and standard errors for yokable participants are presented in the horizontal rows.

*. Correlation is significant at the .05 level (2-tailed)

**. Correlation is significant at the .01 level (2-tailed)

APPENDIX XIV Multilevel modelling caterpillar plot of all practitioners with identified rankings of practitioner respondents

Caterpillar plot controlling for initial patient severity, patient age, ethnicity, unemployment, unemployment in relation to initial severity, functioning and geographical level of multiple deprivation



APPENDIX XV

Development of final multilevel model (Chapter 5, Results I):

	Models across development stages (β values and SE)									
	1 Unemploy	2 Unem x Pre	3 Ethnicity	4 Ethnicity x Pre	7 Funct	8 Funct x Pre	9 Age	10 Age x Pre	11 IMD	12 IMD x Pre
Fixed Coefficients										
Constant	2.165*	2.166*	2.254*	2.245*	2.259*	2.257*	2.248*	2.248*	2.240*	2.240*
	(0.028)	(0.028)	(0.037)	(0.038)	(0.037)	(0.037)	(0.037)	(0.037)	(0.037)	(0.037)
PHQ PRE	0.926*	0.903*	0.897*	0.893*	0.827*	0.830*	0.831*	0.832*	0.821*	0.821*
	(0.020)	(0.022)	(0.022)	(0.023)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
PHQ PRE^2	0.068*	0.060*	0.056*	0.058*	0.039*	0.033*	0.043*	0.039*	0.035*	0.035*
	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.018)	(0.015)	(0.015)	(0.015)	(0.015)
UNEMPLOY	0.179*	0.164*	0.162*	0.164*	0.151*	0.152*	0.148*	0.148*	0.131*	0.131*
	(0.019)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
UNEMP X PRE		0.088*	0.092*	0.086*	0.085*	0.082*	0.091*	0.087*	0.085*	0.085*
		(0.039)	(0.039)	(0.039)	(0.039)	(0.040)	(0.039)	(0.039)	(0.039)	(0.039)
ETHNICITY			-0.098*	-0.090*	-0.093*	-0.093*	-0.081*	-0.081*	-0.067*	-0.068*
			(0.027)	(0.028)	(0.027)	(0.027)	(0.027)	(0.027)	(0..027)	(0.027)
ETHNI X PRE				0.061	x	x	x	x	x	x
				(0.046)						
FUNC					0.006*	0.006*	0.005*	0.005*	0.006*	0.006*
					(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
FUNC X PRE						0.001	x	x	x	x
						(0.002)				
AGE							-0.003*	-0.003*	-0.003*	-0.003*
							(0.001)	(0.001)	(0.001)	(0.001)
AGE X PRE								-0.002*	-0.002*	-0.002*
								(0.001)	(0.001)	(0.001)
IMD									0.002*	0.002*
									(0.001)	(0.001)
IMD X PRE										0.000

										(0.001)
Random Variances										
Patient Level	0.335*	0.335*	0.334*	0.334*	0.332*	0.332*	0.331*	0.330*	0.329*	0.329*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Practitioner Level	0.024*	0.024*	0.023*	0.023*	0.024*	0.024*	0.023*	0.023*	0.022*	0.022*
(Constant)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
χ^2 test value	92.539**	5.049*	26.473**	1.806	28.594**	0.228	26.083**	7.356*	34.509**	0.004

*p <.05
**p <.001
CE = Cognitive Empathy; E = Empathy; EC = Emotional Connection; ECG = Emotional Contagion; M = Mindfulness; R = Resilience; R+M = Resilience and mindfulness; R-M = Resilience minus mindfulness; R+CE = Resilience plus cognitive empathy; R-CE = Resilience minus cognitive empathy.
(Grey shading indicate models which were not retained and variables which were excluded while developing the final model)

APPENDIX XVI

Examination of contribution of practitioner personal aspect variables (Chapter 5, Results II):

	Model parameters (β values and SE)										
	Variable inserted to final model:										
	Final Model	R	E	ECG	CE	EC	M	R+M	R-M	R+CE	R-CE
Fixed Coefficients											
Constant	2.240*	2.247*	2.240*	2.240*	2.240*	2.240*	2.253*	2.255*	2.240*	2.244*	2.244*
	(0.037)	(0.035)	(0.037)	(0.036)	(0.037)	(0.037)	(0.035)	(0.035)	(0.037)	(0.036)	(0.036)
PHQ PRE SCORES	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*	0.821*
	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
PHQ PRE SCORES^2	0.035*	0.035*	0.035*	0.035*	0.035*	0.035*	0.035*	0.036*	0.035*	0.035*	0.035*
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
UNEMPLOYMENT	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*	0.131*
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
UNEMPLOYMENT	0.085*	0.085*	0.085*	0.085*	0.085*	0.085*	0.086*	0.086*	0.085*	0.085*	0.085*
X PRE SCORES	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
ETHNICITY	-0.067*	-0.067*	-0.068*	-0.068*	-0.067*	-0.067*	-0.069*	-0.068*	-0.068*	-0.067*	-0.068*
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
FUNCTIONING	0.006*	0.006*	0.006*	0.006*	0.006*	0.006*	0.005*	0.006*	0.006*	0.006*	0.006*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
AGE	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
AGE X PRE SCORES	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
IMD	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Resilience (R)		-0.007*									
		(0.003)									
Empathy (E)			0.001								

			(0.004)								
Emotional Contagion (ECG)				0.008 (0.008)							
Cognitive Empathy (CE)					-0.001 (0.010)						
Emotional Connection (EC)						-0.000 (0.000)					
Mindfulness (M)							-0.007* (0.002)				
Resilience plus Mindfulness (R + M)								-0.046* (0.014)			
Resilience minus Mindfulness (R – M)									0.002 (0.024)		
Resilience plus Cognitive Empathy (R + CE)										-0.025 (0.016)	
Resilience minus Cognitive Empathy (R – CE)											-0.044* (0.022)
Random Variances											
Patient Level	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)	0.329* (0.006)
Practitioner Level(Constant)	0.022* (0.006)	0.018* (0.005)	0.022* (0.006)	0.021* (0.006)	0.022* (0.006)	0.022* (0.006)	0.018* (0.005)	0.016* (0.004)	0.022* (0.006)	0.020* (0.006)	0.020* (0.005)
χ^2 test value		6.087*	0.082	0.886	0.016	0.016	6.680*	9.532*	0.007	2.423	3.839*

*p <.05
CE = Cognitive Empathy; E = Empathy; EC = Emotional Connection; ECG = Emotional Contagion; M = Mindfulness; R = Resilience; R+M = Resilience and mindfulness; R-M = Resilience minus mindfulness; R+CE = Resilience plus cognitive empathy; R-CE = Resilience minus cognitive empathy.
(Grey shading indicate models which were did not reflect significantly improved models given insertion of specific practitioner aspect variable)

APPENDIX XVII

Unstructured questionnaire: "Reflecting on me as a person and as a practitioner"

Reflecting on me as a person and as a practitioner

I. **WHAT YOU BRING** to your practice.

1. Please list:

5 words you feel describe you as a person in relation to your practice:	5 words you feel your supervisor would use to describe you in relation to your practice:
1)	1)
2)	2)
3)	3)
4)	4)
5)	5)

2. In everyday life (including your professional capacity), what do you feel is particularly 'therapeutic' about you?

3. Is there one distinguishing personal characteristic of your practice?

II. **PERSONAL LIFE: Historical and current events or experiences which contribute to what you bring to your practice (nb: this excludes contribution from your professional life).**

4. What are the ***significant life experiences or relationships in your personal life*** which have been influential in ***developing*** and/or ***nurturing*** what you now bring to your practice?

5. Have you ever received any personal therapy beyond what is required (if any) by your accreditation process? If so, how does your experience as a client influence your professional practice?

6. Why did you become a practitioner?

III. PROFESSIONAL LIFE: Historical and current events or experiences which contribute to what you bring to your practice (nb: this excludes contribution from your personal life).

7. *Since you started your career as a practitioner*, what are the significant experiences within your professional practice (while *working with clients*, engaged in *supervision* or *training*) which have been influential in *developing* and/or *nurturing* what you bring to your practice?

8. In relation to the *past*, (i.e. when you started your career), in what ways do you feel you are *now different* in regards to what you personally bring to your practice?

9. In relation to the *present*, (i.e. your current career development), do you feel you are experiencing growth in your ability and capacity to do therapeutic work? If so, what aspects of your practice are currently developing?

10. Do you experience occasions where you lack confidence that you might have a beneficial effect on a client or are unsure how best to deal effectively with a client? If so, how do you respond when this occurs?

11. When faced with a challenging client, how do you adapt your practice?

IV. WELLBEING: Your wellbeing and its relationship to what you bring to your practice.

12. How does your wellbeing impact on the professional service you deliver?

13. List 5 things that you do to maintain your general wellbeing?

1)

2)

3)

4)

5)

14. Do you actively practice any form of personal mindfulness or meditation? If so, please describe what tasks or activities you engage in.

15. What advice would you give to someone aspiring to consistently deliver effective practice?

16. Do you have further thoughts or comments regarding what you bring personally and professionally to your practice?

Thank you for completing this booklet of questionnaires.

If possible, can you please browse through the pages of this booklet to check that you have completed the consent form and responded to all questions.

You can post your responses using the addressed return envelope included with this questionnaire. The envelope is a freepost envelope and as such, it does not require any stamp when you post your responses to us.

Alternatively, please post this booklet to:

Dave Saxon
Centre for Psychological Services Research (ScHARR)
University of Sheffield
Regent Court
Regent St
Sheffield S1 4DA

I look forward to receiving your anonymised responses and providing you feedback following from my analysis.

Sincerely,

Jo-Ann Pereira
PhD research student (Psychology)
University of Sheffield

APPENDIX XVIII

Initial template: What are the factors of practitioners that contribute to their practice? (Chapter 6, Template analysis):

1. PERSONAL VIEW OF SELF
    1.1. Own
    1.2. What supervisors view is
    1.3. What is therapeutically unique about oneself
2. PERSONAL LIFE
    2.1. Historical influences
    2.2. Personal therapy
    2.3. Why become a practitioner?
3. PROFESSIONAL LIFE
    3.1. Historical influences
    3.2. Retrospective professional development
    3.3. Current professional development
    3.4. Self-doubt
    3.5. Dealing with challenging patients
4. WELLBEING
    4.1. Impact
    4.2. Maintenance
5. OPINIONS/PERSPECTIVES
    5.1. Suggestions to be effective practitioners

The first level-one code is essential in drawing out practitioners immediate descriptors of themselves; their own and those of sig others (i.e. their supervisor) as well as what is therapeutically unique about themselves.

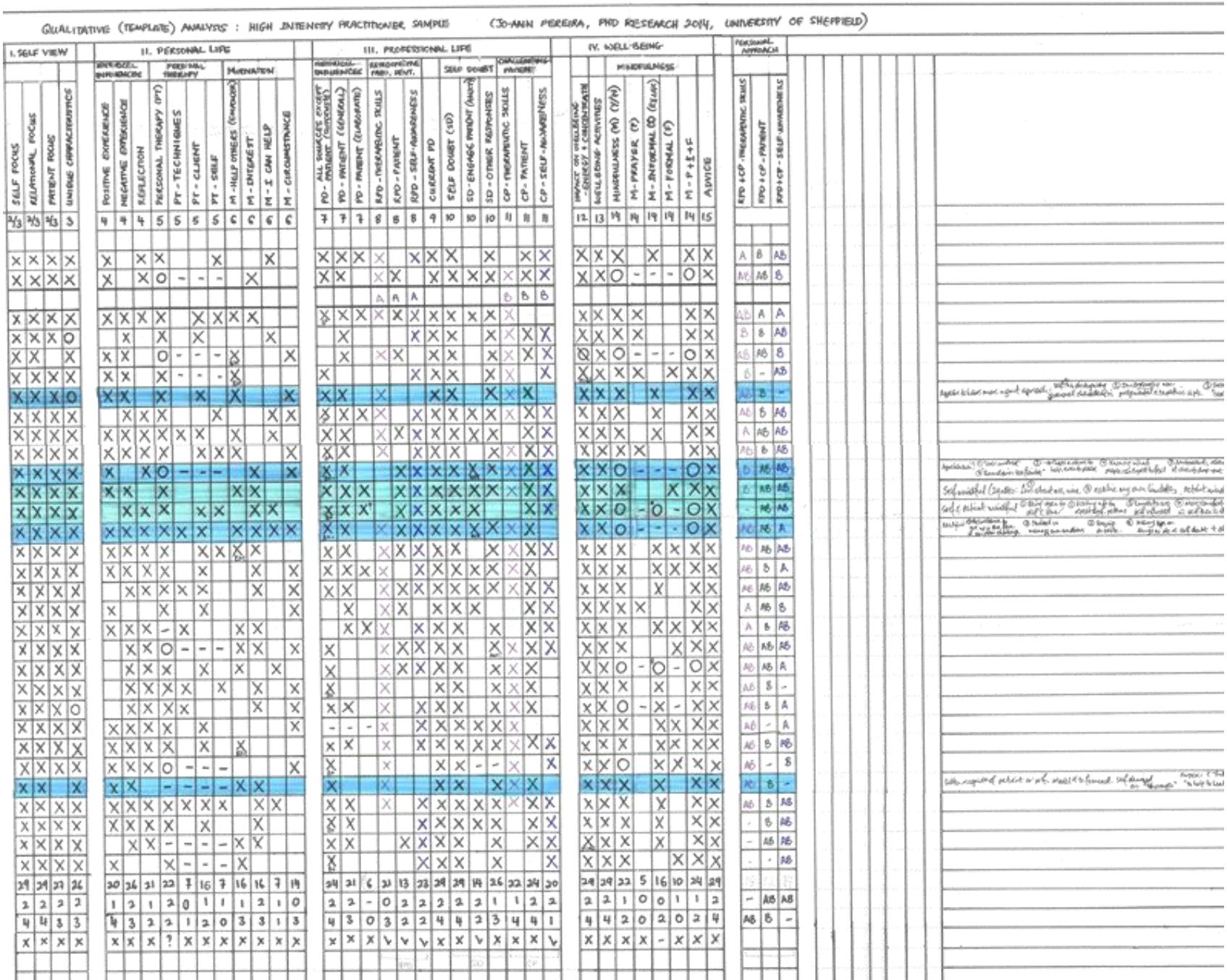
The second level-one code relates to factors personal to the practitioners which contribute to their practice.

'Professional life', the third level-one code encompasses how practitioners' professional life contribute to their practice. The first 3 level-two codes are more descriptive by nature, where practitioners identify professional influences and describe past and present professional changes they observe. The fourth and fifth level-two codes relate to their personal experience with patients and how they respond to challenging patients.

The fourth level-one code acknowledges the impact of practitioners' wellbeing on their practice (as indicated by research literature). The level-two codes assess practitioners' appreciation of the significance of their personal wellbeing and how they go about actively maintaining it.

Finally the fifth level-one code ascertains practitioners' opinion/perspective on how best to go about being an effective practitioner.

APPENDIX XIX Coding table of themes: (Excluding practitioner ID)



APPENDIX XX Template of high intensity practitioner responses (N = 29) with example quotes

Higher Order Themes	Lower Order Themes	Practitioner response-indicated subthemes	Number	Proportion	Examples including quotes
VI. Self-View	17. Distinguishing personal characteristic	- Yes	26	89.7	(Focus on aspects) *"reluctance to 'give up' in the face of complex challenges (clinical)."* (Focus on specific behaviours) *"(carefully considered) self-disclosure"* (Broad descriptives) *"I bring a shared sense of humanity into the therapeutic relationship."*
		- No	3	10.3	*"No. There ought not to be. I hope I do the job I am supposed to do well."*
VII. Personal Life	18. Life experiences	- Negative	26	89.7	Family separation, school bullying, bereavement, relationship breakdowns, personal and family physical and mental illness, suicide of loved ones

		- Positive	20	69.0	Having been raised by nurturing family members, being in supportive and stable relationships, travel, exposure to arts, exposure to diversity, and taking on different personal and work roles in life.
	19. Personal reflection		21	72.4	The ability to manage significant life changes, to be sensitive, to accept others and abilities to establish rapport with people from diverse backgrounds
	20. Personal Therapy	- Yes - No	22 4	75.9 13.8	
	21. Influence of personal therapy	- Technique awareness - Sensitivity to patient process - Self-awareness	7 16	24.1 55.2	(Focus on technique) *"The above are very different models of therapy. Helpful to be aware of different therapeutic approaches and how they work /can work."* (Focus on empathy with patient) *"…personal therapy in a number of settings which has given me insight into how it feels for a client and the possible anxiety a client may feel on entering therapy."*

			7	24.1	(Focus on personal insights) *" took me to a greater level of self-understanding and how limitations/obstacles are usually self-inflicted."*
	22. Reason for becoming a practitioner	- To help	16	55.2	*"to support them to develop their potential"* *"to help people, to make a difference in society"*.
		- Interest	16	55.2	*"to listen to people"* *"what makes them tick"*
		- Awareness that one possesses ability to help	7	24.1	*"Recognition that I had the skills to do the job reasonably well"*
		- Circumstance	14	48.3	*"..the work seemed to offer opportunities to do what really interests me…"*
VIII. Professional Life	23. Historical influences	- All sources except patient (e.g. training, supervision, reflection) - Patient – general influence	24	82.8	*"Through supervision I have identified my own beliefs and values and am now more aware of how these impact me."*

		- Patient – elaborate influence	21	72.4	*"realising that everyone has a different story to tell, but most respond in a similar manner",* *"learned from clients"* *"the different ways people resolve them (problems) 'themselves'"*
			5	17.2	
	24. Retrospective Professional Development (PD)	- Skill development	21	72.4	*"more confident as a practitioner; more knowledgeable and more skilled"* *"I widened my theoretical base with on-going continual professional development"* *"more confident in my skills"*
		- Patient-sensitivity	13	44.8	*"I bring much greater understanding, knowing much of what people with depression, anxiety….can expect to feel"* *"I have much more of an understanding of the diversity/uniqueness of the individual which has developed my empathy/genuineness towards clients"*

		- Self-awareness	23	79.3	*"I can claim to have grown in awareness – understand myself and my ability to work with clients according to their own needs"* *"better able to manage my own emotions, which has made me more able to contain those of my patients*"
	25. Current (PD)	- Yes	29	100.0	
	26. Professional self-doubt	- Yes	29	100.0	
	27. Professional self-doubt response	- Therapeutic skills	26	89.7	*"I seek support, advice/guidance from colleagues and supervisors and via ongoing study"* *"I take these situations to supervision and discuss there, then incorporate the new learning the next time I see the client"*
		- Patient engagement	12	41.4	*"I try to be honest with client if appropriate and talk about uncertainty", "seek feedback from the person (patient)*"
		- Patient engagement (anxious)			*"I often feel ambivalent, offering the patient more therapy, but feel relieved if they drop out")*.

			2	6.90	
	28. Challenging patients	- Therapeutic skills	22	75.9	*"usually by attempting to simplify my approach, try to focus on doing one thing well rather than trying to address all aspects of a complex picture",* *"I take issues such as this to supervision"* *"develop honesty with the client",*
		- Patient-sensitivity	24	82.8	*"trying to develop and convey my empathy for them (client) and their context*" *"focus on my congruence and how I am experiencing the client. Dig in deep and persevere",*
		- Self-awareness	20	69.0	*"by slowing down, being genuine and open to what they are experiencing"*
IX. Wellbeing	29. Impact	- Energy and concentration	29	100.0	*"If I am feeling low, anxious or physically ill, I can't engage as closely and my responses become 'mechanical' – they may be reasonable responses, even effective responses but I know they are lacking"*
	30. Wellbeing activities	- Yes	29	100.0	*"If I am feeling low, anxious or physically ill, I can't engage as closely and my responses become 'mechanical' – they may be reasonable responses, even effective responses but I know they are lacking"*

					Wellbeing activities include personal relaxation activities, physical activities and social activities
	31. Mindfulness-related activities	- Yes	24	82.8	Informal activities i.e. activities done mindfully (e.g., walking, swimming, read literature,), Formal activities (e.g., use of diffusion techniques, 3-point mindfulness exercises, mindfulness meditation) Prayer (e.g., routine prayers and prayer meditation)
		- No	5	17.2	
X. Personal approach (aggregate theme)	32. Combined lower-order themes of "Retrospective PD" (8) & "Challenging patients" (12).	- Therapeutic skills - Patient-orientation - Self-awareness	18 12 17	62.1 41.4 58.6	

APPENDIX XXI :Development of final multilevel model (Chapter 6, Preliminary analysis):

	Models across development stages (β values and SE)											
	1 Unemploy	2 Unem x Pre	3 Ethnicity	4 Ethnicity x Pre	7 Funct	8 Ethnicity x Pre	9 Funct	10 Funct x Pre	11 IMD	12 IMD x Pre	13 Age	14 Age x Pre
Fixed Coefficients												
Constant	2.117*	2.117*	2.204*	2.188*	2.193*	2.117*	2.126*	2.126*	2.135*	2.134*	2.133*	2.134*
	(0.027)	(0.027)	(0.044)	(0.044)	(0.044)	(0.027)	(0.027)	(0.027)	(0.027)	(0.026)	(0.027)	(0.027)
PHQ PRE	0.902*	0.873*	0.896*	1.027*	0.923*	1.048*	0.938*	0.938*	0.926*	0.920*	0.938*	0.918*
	(0.034)	(0.037)	(0.034)	(0.063)	(0.065)	(0.062)	(0.065)	(0.065)	(0.065)	(0.064)	(0.066)	(0.067)
PHQ PRE^2	0.079*	0.070*	0.074*	0.082*	0.055*	0.088*	0.059*	0.059*	0.055*	0.053*	0.059*	0.053*
	(0.021)	(0.022)	(0.022)	(0.022)	(0.022)	(0.021)	(0.022)	(0.027)	(0.022)	(0.022)	(0.022)	(0.022
UNEMPLOY	0.218*	0.204*	0.215*	0.217*	0.200*	0.220*	0.202*	0.202*	0.185*	0.184*	0.184*	0.184*
	(0.026)	(0.027)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
UNEMP X PRE		0.103* (0.054)	x	x	x	x	x	x	x	x	x	x
ETHNICITY			-0.097* (0.038)	-0.084* (0.039)	-0.073 (0.038)	x	x	x	x	x	x	x
ETHNI X PRE				-0.143* (0.059)	-0.141* (0.058)	-0.157* (0.058)	-0.153* (0.057)	-0.153* (0.057)	-0.150* (0.008)	-0.140* (0.058)	-0.157* (0.059)	-0.136* (0.060)
FUNC					0.008* (0.002)		0.008* (0.002)	0.008* (0.002)	0.008* (0.002)	0.008* (0.002)	0.008* (0.002)	0.008* (0.002)
FUNC X PRE								0.000 (0.003)	x	x	x	x

IMD									0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	-0.002* (0.001)
IMD X PRE										0.001 (0.001)	x	x
Age											-0.002* (0.001)	0.003* (0.001)
Age X PRE												0.003* (0.001)
Random Variances												
Patient Level	0.410* (0.011)	0.410* (0.011)	0.409* (0.011)	0.409* (0.011)	0.405* (0.010)	0.409* (0.011)	0.406* (0.010)	0.406* (0.010)	0.405* (0.010)	0.405* (0.010)	0.404* (0.010)	0.403* (0.010)
Practitioner Level (Constant)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.013* (0.005)	0.012* (0.004)	0.012* (0.004)	0.012* (0.004)	0.012* (0.004)
(Slope)	0.006 (0.005)	0.005 (0.004)	0.007 (0.005)	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.004 (0.004)	0.003 (0.003)	0.004 (0.004)	0.004 (0.004)
(Covariance)	0.010 (0.004)	0.010 (0.004)	0.010 (0.004)	0.010 (0.004)	0.010 (0.004)	0.011 (0.004)	0.011 (0.004)	0.011 (0.004)	0.009 (0.003)	0.009 (0.003)	0.009 (0.003)	0.009 (0.004)
χ^2 test value	67.103**	3.552	20.116**	5.356*	27.455**	20.711**	28.588**	0.000	19.911**	1.285	7.986*	3.932*

*p <.05

**p<.001

(Gray shading indicate models which were did not reflect significantly improved models given insertion of specific practitioner aspect variable)